Operating Instructions

Generator

PG-I 42 SE

PG-I 80 SE

PG-I 42 SE

PG-I 80 SE

PG-I SE SERIES

Imprint

Product identification

Generator	Item number
PG-I 42 SE	6706420
PG-I 80 SE	6706800

Manufacturer

Stürmer Maschinen GmbH
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Indications regarding the operating instructions

Original instructions

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Indications regarding the copyright

Subject to technical modifications and error.

Content

1 Introduction

You have made a good choice by purchasing the UNI-CRAFT Generator.

Read the operating manual thoroughly before commissioning the machine.

It gives you information about the proper commissioning, intended use and safe and efficient operation and maintenance of your Generator

The operating manual is part of the Generator package. Always keep this operating manual in the location where your Generator is being operated. All local accident prevention regulations and general safety instructions for the operating range of your Generator must also be complied with.

1.1 Copyright

The contents of these instructions are copyright. They may be used in conjunction with the operation of the generator. Any application beyond those described is not permitted without the written approval of Stürmer Maschinen GmbH. For the protection of our products, we shall register trademark, patent and design rights, as this is possible in individual cases. We strongly oppose any infringement of our intellectual property

1.2 Customer service

Please contact your dealer if you have questions concerning your Generator or if you need technical advice. They will help you with specialist information and expert advice.

Germany:
Stürmer Maschinen GmbH
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Repair service:
Fax: 0049 (0) 951 96555-111
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Spare part orders:
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We are always interested in valuable experience and knowledge gained from using the application which then could be shared and be valuable to develop our products even further.

1.3 Limitation of liability

All information and notes in these operating instructions were summarised while taking applicable standards and rules, the state-of-the-art technology and our long-term knowledge and experiences into consideration.

In the following cases the manufacturer is not liable for damages:

- Non-observance of the operating instructions,
- Inappropriate use
- Use of untrained staff,
- Unauthorised modifications
- Technical changes,
- Use of not allowed spare parts.

The actual scope of delivery may deviate from the explanations and presentations described here in case of special models, when using additional ordering options or due to latest technical modifications.

The obligations agreed in the delivery contract, the general terms and conditions as well as the delivery conditions of the manufacturer and the legal regulations at the time of the conclusion of the contract are applicable.

2 Safety

This section provides an overview of all important safety packages for the protection of the operating personnel as well as for safe and fault-free operation. Other task based safety notes are included in the paragraphs of the individual phases of life.

2.1 Symbol explanation

Safety instructions

The safety notes in these operating instructions are highlighted by symbols. The safety notes are introduced by signal words which express the concern of the risk.

DANGER!

This combination of symbol and signal words indicates an imminently dangerous situation which may lead to death or severe injuries if they are not avoided.

WARNING!

This combination of symbols and signal words indicates a possibly dangerous situation which may lead to death or severe injuries if they are not avoided.

CAUTION!

This combination of symbol and signal words indicates a possibly dangerous situation which may lead to minor or light injuries if they are not avoided

ATTENTION!

This combination of symbol and signal words indicates a possibly dangerous situation which may lead to property and environmental damages if they are not avoided.

NOTE!

This combination of symbol and signal words indicates a possibly dangerous situation which may lead to property and environmental damages if they are not avoided.

Tips and recommendation

Tips and recommendation

This symbol highlights useful tips and recommendation as well as information for all efficient and trouble-free operation.

It is necessary to observe the safety notes written in these operating instructions in order to reduce the risk of personal injuries and damages to property.

2.2 Obligations of the operating company

Of the operator

The operating company is the person who operates the Generator for business or commercial reasons by herself, or leaves it to a third party for use or application, and who bears the legal product responsibility for the protection of the user, the staff or for third parties.

Obligations of the operating company

If the generator is used for commercial purposes, the operating company of the generator must comply with the legal working safety regulations. Therefore, the safety notes in this operating manual, as well as the safety, accident prevention and environment protection regulations applying for the area of application of the generator must be met. The following applies in particular:

- The operator must inform himself about the applicable occupational health and safety regulations and determine additional hazards in a hazard assessment which are caused by the special working conditions at the place of use of the machine. These must be implemented in the form of operating instructions for the operation of the machine.
- During the entire period of use of the machine, the operator must check whether the operating instructions issued by him correspond to the current state of the rules and regulations and, if necessary, adapt them.
- The operator must clearly regulate and define the responsibilities for installation, operation, troubleshooting, maintenance and cleaning.
- The operator must ensure that all persons handling the machine have read and understood these instructions. In addition, he must train the personnel at regular intervals and inform them about the dangers.
- The operator must provide the personnel with the necessary protective equipment and instruct them to wear the required protective equipment in a binding manner.

Furthermore, the operator is responsible for ensuring that the machine is always in perfect technical condition. The following therefore applies:

- The operator must ensure that the maintenance intervals described in these instructions are observed.
- The operator must have all safety devices regularly checked for operability and completeness.

2.3 Requirements to staff

The different tasks described in this manual represent different requirements to the qualification of the persons entrusted with these tasks.

WARNING!

Danger in case of insufficient qualification of the staff!

Insufficiently qualified persons cannot estimate the risks while using the generator and expose themselves and others to the danger of severe or lethal injuries.

- Have all works only performed by qualified persons.
- Keep insufficiently qualified persons out of the working area.

Only persons reliable working procedures can be expected from, are allowed to perform all works. Persons the responsiveness of which is affected by e. g. drugs, alcohol or medication, are not allowed to work with the device.

The qualifications of the personnel for the different tasks are mentioned below:

Operator

The operator is instructed by the operating company about the assigned tasks and possible risks in case of improper behaviour. Any tasks which need to be performed beyond the operation if it is indicated in these instructions and if the operating company expressively commissioned the operator.

Qualified personnel

Due to their professional training, knowledge and experience as well as their knowledge of relevant regulations the specialist staff is able to perform the assigned tasks and to recognise and avoid any possible dangers themselves.

Manufacturer

Certain works may only be performed by specialist personnel of the manufacturer. Other personnel is not authorized to perform these works. Please contact our customer service for the execution of all arising work.

2.4 Personal protective equipment

The personal protective equipment serves to protect persons against impairments of safety and health while working. The staff member has to wear personal protective equipment while performing different tasks on and with the machine which are indicated in the individual paragraphs of these instructions.

The personal protective equipment is explained in the following paragraph:

Protective goggles

The protective goggles serve to protect the eyes against parts flying off.

Protective gloves

The protective gloves serve to protect the hands against sharp components as well as against friction, abrasions or deep injuries.

Safety boots

Safety boots protect the feet from being crushed, falling parts and slipping over on slippery ground

Protective clothes

Protective clothes are made of a tightly fitted fabric without the protruding parts of low tear strength.

2.5 General safety instructions

- Never operate the generator in closed rooms which do not have sufficient ventilation. The engine produces carbon monoxide and other harmful gases that are harmful to the health of the people who breathe them. If you feel dizzy or have a fainting spell, get out into the fresh air immediately. For this reason, adequate ventilation must be ensured. Combustion fumes must be led out of the engine room or the working area of the personnel via pipes and exhaust systems. It is recommended to install a CO alarm device!
- Only operate the generator outdoors. DO NOT allow exhaust gases to enter a closed area through windows, doors, vents or other openings.
- Operate the generator only on horizontal surfaces to ensure optimum flow of oil and fuel to the motor. If operation on horizontal surfaces is not possible, the user must install suitable mounting and levelling devices to ensure safe stand the generator.
- Always wear firm and dry shoes while working on the generator. Never work barefoot!
- Do not operate the generator if you are tired or under the influence of drugs, alcohol or medication.
- Keep children away from the running generator at all times and in any case; note that the switched off motor will remain hot for some time. At the exhaust, the exhaust pipes and at the engine the increased temperatures last the longest. Touching them can cause severe burns.
- Do not carry out any checks or maintenance work on the generator in operation; switch off the motor in any case. NEVER touch blank wires or sockets.
- DO NOT use a damaged or frayed electrical cable.
- DO NOT operate the generator in the rain.
- Use an RCD in humid areas and areas containing conductive material.
- Refueling with fuel and topping up oil must be done with the engine switched off (5 minutes cooling time). It must be noted that the engine will maintain its high temperature for a period of time after it has been switched off.
- Allow the machine to cool before touching it. A minimum distance of 90 cm should be maintained on all sides to ensure adequate cooling. Keep at least 1.5 m away from flammable materials.
- When unscrewing the tank cap, open it slowly to slowly reduce any existing pressure.
- Keep fuel away from sparks, open fire, ignition flames, heat and other sources of ignition.
- The functions and circuits of the generator should be known: Unexperienced persons should not be allowed to use the generator.

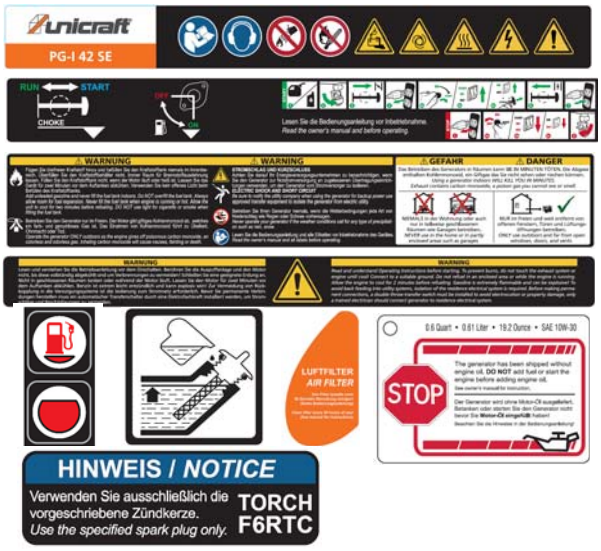
- Do not misuse the machine for other purposes, such as: heating a room with the heat emitted by the motor, etc.
- DO NOT attempt to start a damaged generator. Make sure that the fuel filler cap, air filter, spark plug, fuel lines and exhaust system are in good condition.
- When starting the motor, slowly pull the starter cable until resistance is noticeable and then pull quickly to avoid kickback. DO NOT start or stop the motor when electrical equipment is connected.
- When the device is not in use, unauthorized access must be prevented; therefore equip the generator with blocking systems (remove the ignition key, lock the protection cover with appropriate locks, etc.).
- DO NOT overload the generator.
- Make sure that the cooling slots are not blocked. If connected devices overheat, turn them off and disconnect them from the generator.
- Do not remove any guards and do not leave the machine running without suitable protection (sides and housing) so as not to expose the user to danger.
- Do not remove any protective devices and do not run the machine without suitable protection (sides and housing) to avoid exposing the user to danger.
- NEVER use this device to power medical equipment.
- When servicing the generator: disconnect the ignition cable and place it in a place where it cannot touch the plug. Use only approved spark plug testers.
- Do not run the machine in rooms with a potentially explosive atmosphere.
- In an emergency, do not use water to extinguish fires, only special safety systems (powder fire extinguishers, etc.).
- If it is necessary to work near the machine, it is necessary to use hearing protection (headphones, ear protectors, etc.).
- When transporting or servicing the generator: Make sure the fuel shut-off valve is off and the fuel tank is empty. Disconnect spark plugs !

ATTENTION!

Avoid direct physical contact with fuel, engine oil and battery acid. In case of skin contact, wash with water and soap and rinse thoroughly: do not use organic solvents. In case of eye contact, wash with water and rinse thoroughly. If these liquids are inhaled or swallowed, consult a doctor immediately.

2.6 Safety labels on the generator

The following safety labels and instructions are attached to the generator (Fig. 1) and must be observed.



PG_I 80 SE

Fig. 1: Safety labels PG-I 42 SE and PG-I 80 SE

The safety labels attached to the machine must not be removed. Damaged or missing safety labels can lead to incorrect actions, personal injury and damage to property. They must be replaced immediately.If the safety markings are not recognisable and understandable at first glance, the machine must be taken out of operation until new safety markings have been applied.

3 Intended Use

The generator is used exclusively to generate electricity. It can be used universally for 230V consumers.

The Generator may only be operated by persons who have been instructed on the machine.

Intended use also includes compliance with all information in these instructions. Any use exceeding the intended use or any other use is considered misuse.

Stürmer Maschinen GmbH accepts no liability for design and technical modifications to the generator. Claims of any kind for damage due to improper use are excluded.

3.1 Foreseeable misuse

The following applications are prohibited:

- Use of waste heat for heating purposes
- Other use of the exhaust gases

4 Technical Data

4.1 Table

Model	PG-I 42 SE	PG-I 80 SE
Length	557 mm	730 mm
Width / Depth	464 mm	610 mm
Height	478 mm	730 mm
Weight	42 kg	105 kg
Drive motor	SV 230	SC 460
Power max.	3,7 kW	7,7 kW
Motor Power	5 PS	10,5 PS
Fuel	Petrol	Petrol
Tank capacity	15 l	25 l
Speed	3600 min^{-1}	3600 min^{-1}
Sound pressure level Lp	76 dB(A)	74 dB(A)
Sound power level Lw	96 dB(A)	94 dB(A)
Nominal voltage	230 V	230 V
Continuous output COP	3,8 kVA	7,0 kVA
Active power COP	3,8 kW	7,0 kW
Max. voltage deviation	4 %	4 %
Degree of protection (Generator)	IP 23M	IP 23M

4.2 Type plate

Fig. 2: Type plate Generator PG-I 42 SE

5 Transport, packaging, storage

Delivery

After delivery, check the generator for visible transport damage. If you find any damage to the generator, report it immediately to the transport company or the dealer.

Transport

ATTENTION!

Only transport the generator with an empty fuel tank! The spark plug connector must be disconnected.

NOTE!

Observe the weight of the machine during transport and lifting. The transport and lifting equipment must be able to carry the load.

NOTE!

Protect the machine from humidity.

The generator may only be transported standing up. During transport, the generator must be well secured so that it cannot tip over; drain the fuel and ensure that no acid or vapours escape from the battery (if any). For transport on road vehicles, check the entire mass of the machine. Never start the generator inside a vehicle.

Tips and recommendations

For longer transports, make sure that the corrosion protection is intact or renewed if necessary.

Transport with a forklift/lift truck:

For transport with a sufficiently dimensioned lift truck or forklift truck, the generator must stand upright and secured against falling over on a level, firm surface (e.g. on a pallet).

5.1 Packaging

All used packaging materials and packaging aids are recyclable and should be taken to a materials recycling depot to be disposed of.

The delivery packaging is made of cardboard, so please dispose carefully by having it chopped up and given to the recycling collection.

The film is made of polyethylene (PE) and the cushioned parts of polystyrene (PS). These materials should be taken to a collection point for recyclable materials or to the local waste disposal company.

5.2 Storage

Store the generator thoroughly cleaned in a dry, clean and frost-free environment. Generators must not be stacked on top of each other. Also no other objects may be placed on them.

ATTENTION!

The generator should be started every seven days at the latest and run for approx. 30 minutes. If this is not possible and the generator is out of service for more than 30 days, appropriate measures should be taken to ensure proper storage.

ATTENTION!

It is important to prevent deposits in the fuel system (carburettor, fuel hose or tank) during storage. Alcohol-containing fuels (ethanol or methanol) can absorb moisture which leads to acid formation during storage. Acidic gases can damage the fuel system and should be drained for 30 days or more prior to storage. Never use engine or carburetor cleaner in the fuel tank as this could cause permanent damage.

If the generator is not used for more than 30 days, it is recommended to empty the fuel tank completely. For petrol motors, it is important to empty the carburetor pan: older petrol residues will damage the parts that come into contact with them.

ATTENTION!

Fire or explosion can cause severe burns or death. Fill or drain fuel only in well-ventilated outdoor spaces. Do not pump fuel directly into the generator. Use an approved container to transport fuel to the generator. Never use a fuel tank, hose, cylinder or other fuel-related object that is damaged or appears to be damaged. Do not overfill the fuel tank. Keep fuel away from sparks, open fire, ignitions, heat and other ignition sources. Do not light or smoke cigarettes.

ATTENTION!

Petrol is highly flammable and explosive under certain conditions. Do not smoke or produce sparks in the immediate environs.

Short-term storage (less than 1 year) PG-I 42 SE

Petrol in the fuel tank has a maximum lifetime of up to 1 year if proper fuel stabilizers are added and stored in a cool, dry place. The petrol in the carburetor can be sediment and block the carburetor if it is not used or drained within 2 weeks.

Procedure

1. Ensure that all devices are disconnected from the generator.
2. Add a proper fuel stabilizer to the tank.
3. Run the generator for 10 minutes to allow the treated fuel to pass through the fuel system and carburetor.
4. While the generator is running, turn the fuel valve to the "OFF" position and keep the generator running until the engine shuts down due to fuel shortage. This normally takes a few minutes.
5. Set the motor switch to "OFF".
6. Allow the generator to cool down completely before proceeding.
7. **Optional:** To ensure that the fuel is drained completely from the carburetor, use the drain screw on the carburetor to drain excess fuel into a suitable container.
8. Remove the spark plug connector and spark plug and pour a tablespoon of oil into the cylinder.
9. Slowly pull the cable to move the piston in the cylinder to distribute the oil and lubricate the cylinder.
10. Replace the spark plug and spark plug connector.
11. If the power generator contains a battery, disconnect and charge it as described in the instructions.
12. Clean the generator according to generator maintenance.
13. Store the generator in a cool, dry place away from direct sunlight.

Long term storage (over 1 year) PG-I 42 SE

When storing for more than 1 year, the fuel tank and the carburetor must be completely empty.

Procedure

As for short-term storage, additionally applies:

the fuel must be completely drained from the fuel tank and the carburetor. Drain the petrol into a suitable container.

Storage of the generator PG-I 80 SE

Allow the generator to cool for 30 minutes before preparing the generator for storage. Follow the instructions below.

Between 2 months and up to one year

Drain the fuel from the tank and dispose of it in a suitable container in accordance with legal and local regulations.

One year or longer

- Remove spark plug.
- Drain the fuel from the tank and dispose of it in a suitable container in accordance with national and local regulations.
- Fill a tablespoon of motor oil into the reserve cylinder. Start the engine slowly with the tow rope to distribute the engine oil.
- Replace the spark plug.
- Change the motor oil and fill with fresh petrol after removal from storage.

NOTE!

If you store the petrol in a suitable container for later use, make sure that the petrol has been treated with fuel in accordance with the instructions of the stabiliser manufacturer.

NOTE!

The motor work well with 10% or less ethanol blends. When using fuel blends there are some points to consider:

- Ethanol-petrol blends can absorb more water than petrol alone.
- These blends can eventually separate and leave water or watery dirt in the tank, fuel valve and carburetor.
- With gravity-fed fuel supplies, this compromised fuel can be sucked into the carburetor and damage the engine and/or cause potential hazards.
- There are few suppliers of fuel stabilizers designed for use with ethanol blended fuels.
- Damage or hazards caused by the use of incorrect fuel, incorrectly stored fuel and/or incorrectly formulated stabilizers are not covered by the manufacturer's warranty.

To prevent accidental or unintended ignition of your generator during storage, the following precautions should be followed:

- When storing the generator, make sure that the motor switch and fuel valve are set to "OFF".
- If your power generator contains a battery, disconnect it from the power generator.

After storing the generator

If the generator has been stored improperly with gasoline in the fuel tank and/or carburetor for an extended period of time, all fuel must be drained and the carburetor thoroughly cleaned. This process involves technically advanced tasks. Please call our technical support for assistance. If the fuel tank and carburetor were completely empty before storing the generator, follow the steps below when removing the generator from storage.

1. Fill the generator with fuel according to the instructions.
2. When the motor switch is set to "OFF", set the fuel tap to "ON". After 5 minutes, check the carburettor and air filter area for leaking fuel. If this is detected, the carburetor must be disassembled and cleaned or replaced. If no fuel leaks are detected, set the fuel tap to "OFF".
3. Check oil level and top up with clean, fresh oil if necessary.
4. Check the air filter and clean it of obstacles such as beetles or cobwebs. If necessary, clean as described in the air filter section.
5. If the generator contains a battery, connect it according to the battery connection procedure.
6. Start the generator.

Important temperature information

Your power generator PG-I 42 SE is designed for continuous operation at ambient temperatures from -15 °C to 50 °C.

Your power generator PG-I 80 SE is designed for continuous operation at ambient temperatures from -10 °C up to 45 °C.

If the generator is exposed to temperatures outside this range during storage, it should be brought back into this temperature range before operation. In any case, the generator must always be operated outdoors, in a well-ventilated area and away from doors, windows and other ventilation openings.

6 Description of the device

Illustrations in these operating instructions may differ from the original.

6.1 PG-I 42 SE

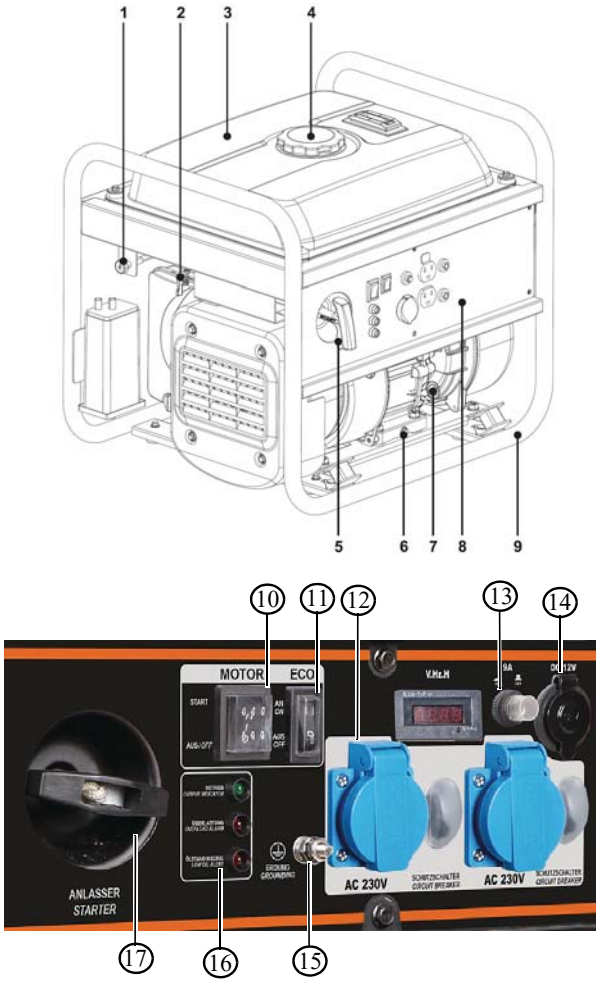


Fig. 3: Generator PG-I 42 SE

1 Choke
2 Fuel valve
3 Tank
4 Filler neck
5 Pull-wire starter
6 Oil drain plug
7 Oil dipstick
8 Control panel
9 Steel frame
10 ON / OFF switch
11 ON / OFF switch ECO mode
12 Connection for 230V consumer
13 Circuit breaker 9A
14 Output 12 V DC
15 Ground connection
16 Control lights
17 Pull-wire starter

6.2 PG-I 80 SE

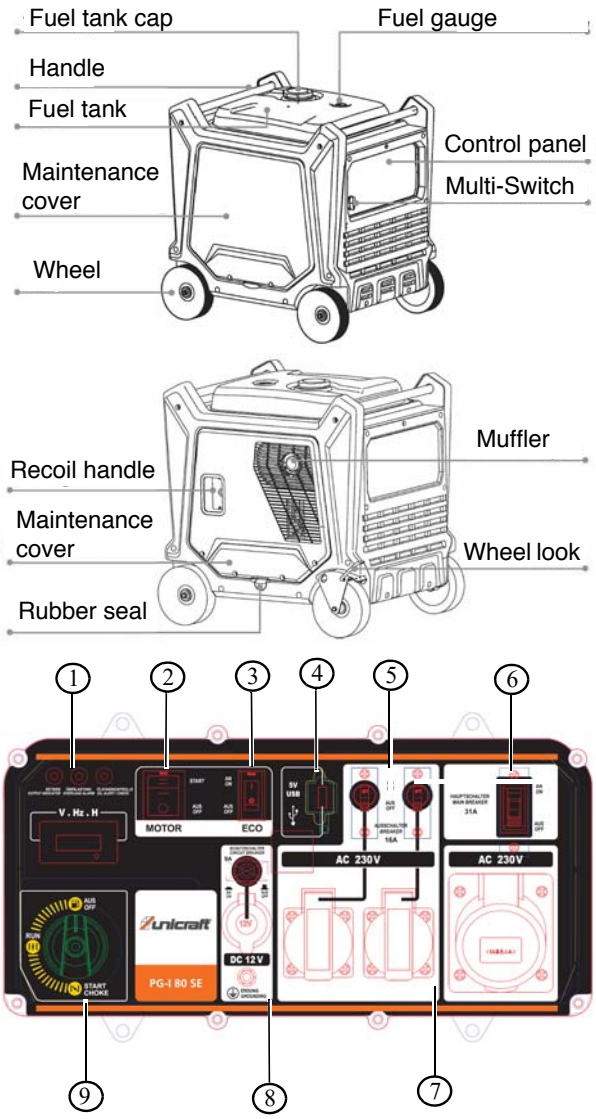


Fig. 4: Generator PG-I 80 SE

1 Control lights
2 ON / OFF Motor switch
3 ON / OFF switch ECO
4 USB port
5 OFF button 16 A
6 Main switch
7 Sockets
8 Grounding / circuit breaker
9 Multi-Switch / Choke

7 Control elements and functions

7.1 PG-I 80 SE

Connection for consumers (sockets)

The receiver can be used to operate corresponding devices such as electrical lighting or tools.

Air Filter

The air filters help to limit the amount of dirt and dust that is sucked into the unit during operation.

ECO-Button

The ECO button controls the engine speed and saves fuel. When the switch is in the ON (I) position and no equipment is connected to the appliance, the engine runs at idle. When a device is added, the engine speed increases to power the item. When the unit is removed, the engine returns to idle.

NOTE!

If high electrical loads are connected simultaneously, turn off the ECO switch to reduce voltage changes.

Fuel tank

Before operation, start with a full tank to increase the operating time. Always refuel with the engine switched off and cooled down.

Fuel gauge

The fuel gauge is a mechanical device that measures the fuel level in the tank. The red indicator in the window indicates the fuel level in relation to full or empty.

Ground terminal

The ground terminal is used to assist in properly grounding the generator to help protect against electrical shock. Consult with a local electrician for grounding requirements in your area.

LED display

LEDs indicate when the generator is running, overloaded or in need of lubricant.

NOTE!

The overload indicator may also turn on for a few seconds when electrical loads requiring a high starting current have been connected, e.g. Compressors, pumps or refrigeration units. In this case, there is no interference.

Oil indicator light (red):

As the motor oil level drops below the required minimum level, this light switches on and the motor stops automatically. The engine cannot be restarted until oil has been refilled and the correct level has been reached.

NOTE!

If the oil light flashes during starting and the engine does not start, oil must be refilled before a new start attempt.

Only operate the generator on flat surfaces! An uneven position of the generator can lead to activation of the engine oil protectio

Motor ON/OFF switch

In to start the generator, the switch must be set to "I". If the switch is set to "O", the motor is stopped and cannot be started.

Parallel connector between 2 generators

The parallel connection of two generators enables a correspondingly increased power consumption of the connected loads.

Wire rope hoist

Used when the battery voltage is too low to start the starter motor. Pull the wire rope to start the generator engine manually.

12V output

The 12V output is used to charge batteries. To charge batteries, please follow the battery manufacturer's instructions.

Multi-Switch

The multi-switch is used to control fuel and choke. When storing the generator, the multiswitch must be switched to the OFF position.

Petrol cock

The fuel cock controls the flow of fuel from the tank to the carburetor. The valve knob must be set to "I" to start and operate the generator. Set the fuel tap to "O" when the engine is switched off and the generator is stored or transported.

NOTE!

The closed fuel tap prevents the carburettor from filling up with fuel during storage and transport.

To use up the remaining fuel, turn the fuel tap to "O" and leave the engine running until it switches itself off after the remaining fuel has been used up.

Choke

The choke is used for a cold start (when the engine is cold). Pull the lever out completely to start the motor. After the motor has warmed up sufficiently and stable operation has been achieved, push the lever back. It is not necessary to use the choke when starting an motor that is already warm.

Socket 230V AC

The socket can deliver a power of 230V continuously.

8 Preparation and set-up

Use protective gloves!

Wear safety boots!

Wear protective clothes!

CAUTION!

Danger of crushing!

If you work improperly on the generator, there is a risk of injury to fingers and hands.

- Observe the weight of the generator. Ensure stable supports and support devices.en.

Unpacking the generator

Step 1: Place the carton on a stable and level surface.

Step 2: Remove the packaging from the generator.

Step 3: Inspect the generator and ensure that it has not been damaged in transit. If transport damage is found, contact customer service or the dealer. In this case, do not fill the generator with fuel or attempt to start it.

8.1 Preparation PG-I 42 SE and PG-I 80 SE

Connect battery

DANGER!

To reduce the risk of electric shock or explosion, do not short-circuit the battery terminals or charge in a sealed container. Keep sparks and flames away.

DANGER!

Keep metal objects away from the battery terminals. Metal objects can connect from one terminal to another. Short circuiting the battery terminals can cause sparks, burns or fire. '"

DANGER!

The battery may need to be charged before the generator can be started with the engine switch or pull starter. Once the generator is started, the battery is charged while the unit is running.

The battery cables must be connected before the power generator can be operated.

Use the following steps to connect the battery cables:

Step 1: Loosen the screws on the side of the right maintenance cover (Fig.5) and remove it (PG-I 80 SE only).

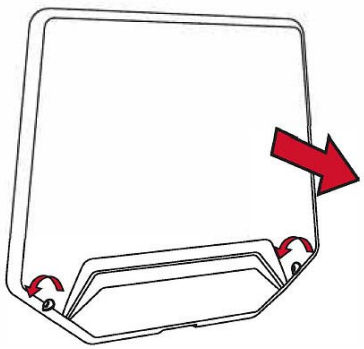
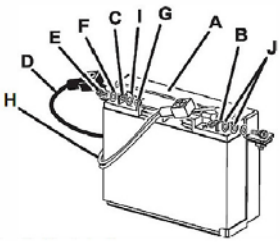


Fig. 5: Open cover PG-I 80 SE

Step 2: First connect the red cable to the positive pole (+) and then the black cable to the negative pole (-). Make sure that all connections are secure.

Step 3: Secure the terminals with the rubber covers (if present).



A - Battery bracket
B - Positive (+) terminal
C - Negative (-) terminal
D - Black wire (-)
E - Screw
F - Washer
G - Nut
H - Red wires (+)
I - Negative terminal connection
J - Positive terminal connections

Fig. 6: Description of the battery

Fill engine oil

The generator is supplied without motor oil. Do not fill the generator with fuel or attempt to start the generator before the oil is filled.

NOTE!

DO NOT attempt to start or start the engine until it has been properly filled with the recommended type and quantity of oil. If you damage the generator by not following these instructions, your warranty will be voided.

NOTE!

The generator rotor has a sealed, pre-lubricated ball bearing that requires no additional lubrication for the life of the bearing.

Engine oil has a great influence on engine performance and service life. SAE 10W-30 is recommended for general use at all temperatures. Always use a 4-stroke engine oil that meets or exceeds the requirements.

Place the generator on a flat surface to fill the oil.

A: Model PG-I 80 SE

Step 1: Loosen the screws on the left side of the maintenance cover (Fig.7) and remove them.

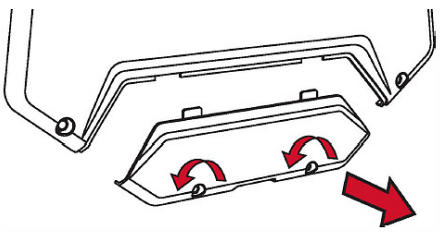


Fig. 7: Open the cover

Step 2: Unscrew and remove the oil cover / dipstick.

Step 3: With the help of a funnel 1.1 liters of oil of type Fill in 10W-30. Wait until the oil has completely run into the container and the level has adjusted.

Step 4: Wipe the dipstick clean and replace it in the opening. Do not rethread the dipstick!

Step 5: Pull the dipstick out again and check the engine oil level. The engine oil level should be between the minimum and maximum mark on the dipstick.

Step 6: Top up engine oil if the level is too low.

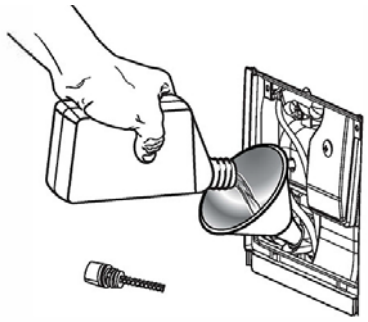


Fig. 8: Fill engine oil

Step 7: Replace the cap / dipstick and secure it.

B: Model PG-I 42 SE

Step 1: Remove the oil filler cap / dipstick to top up oil.

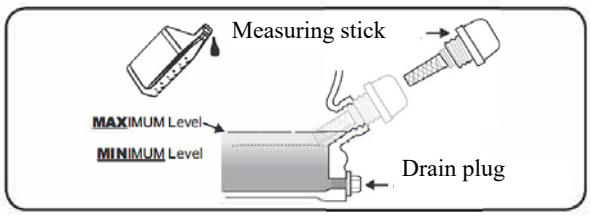


Fig. 9: Remove closure of the oil filler neck

Step 2: With the help of a funnel 0.6 liter oil of the type

Fill in 10W-30.

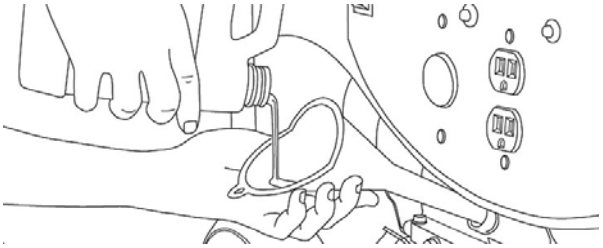


Fig. 10: Fill in oil

Step 3: Wait until the oil has completely run into the container and the level has adjusted. Then check the correct oil level (1, Fig. 11).

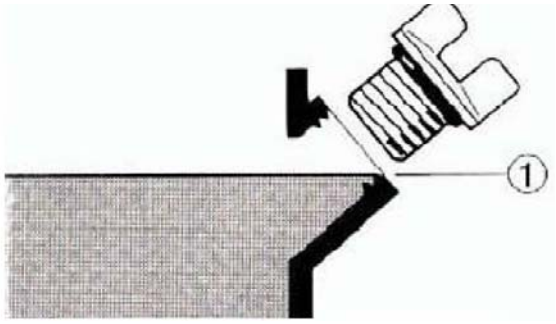


Fig. 11: Check oil level

DANGER!

Never mix different types of oil!

DANGER!

Check the oil frequently during the running-in period. Refer to the Maintenance section for recommended service intervals.

DANGER!

We consider the first 5 operating hours as the running-in period for the unit. During the running-in period, stay at or below 50% of the rated power and occasionally vary the load to allow the stator windings to heat up and cool down. Adjusting the load also changes the motor speed and helps to break in the piston rings. Change the oil after the 5 hour running-in period.

NOTE!

The engine is equipped with a low oil cut-off and stops when the oil level in the crankcase falls below the threshold value.

The weather influences the engine oil and engine performance. Change the type of engine oil used according to weather conditions to meet engine requirements.

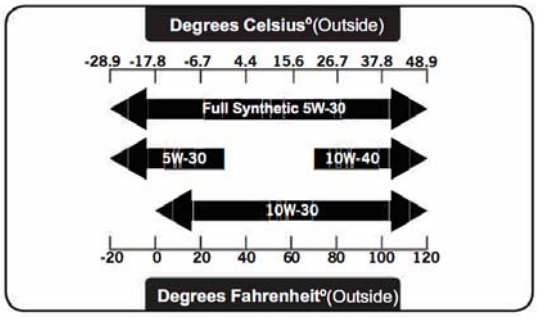


Fig. 12: Temperature table oil

NOTE!

Synthetic oil can be used after the first running-in period of 5 hours. The use of synthetic oil does not extend the recommended oil change interval.

Fill in gasoline

NOTE!

Gasoline and its vapors are highly flammable and explosive. Handle gasoline with care to avoid serious injury and damage to property. Keep away from ignition sources, handle only outdoors, do not smoke when refilling fuel and immediately wipe up spilled material.

Use clean, fresh, unleaded fuel with a minimum octane number of 85 and an ethanol content of less than 10% by volume.

DANGER!

DO NOT mix oil with fuel.

When filling fuel into the generator, make sure that the unit is on a level surface. If the engine is hot, allow the generator to cool down before adding fuel. ALWAYS fill the fuel tank outdoors with the machine switched off.

Step 1: Clean the area around the fuel cap.

Step 2: Remove the tank cap.

Step 3: Slowly fill fuel into the tank. DO NOT OVERFILL. Fuel may expand after filling.

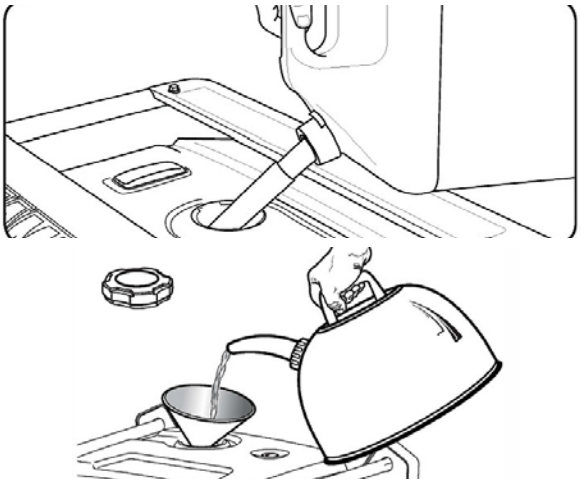


Fig. 13: Filling up with fuel

Step 4: Close the filler cap and wipe off any spilled fuel.

DANGER!

Use regular unleaded gasoline with a minimum octane number of 85.

Never use old, stale or contaminated gasoline or an oil/gas mixture. Do not let dirt or water into the fuel tank.

Do not mix oil and gasoline.

Fill the tank to approx. 6 mm below the top edge of the tank to allow for fuel expansion.

DO NOT pump the fuel directly into the generator at the filling station. Use an approved container to transport the fuel to the generator.

DO NOT fill the fuel tank indoors.

DO NOT fill the fuel tank while the engine is running or hot.

Avoid ignition sources and DO NOT smoke when filling the fuel tank.

Using the fuel stabilizer:

Fuel becomes old, oxidizes and decomposes over time. Adding a fuel stabilizer (not included) will extend fuel life and prevent the formation of deposits that can clog the fuel system. Follow the fuel stabilizer manufacturer's instructions to obtain the correct stabilizer to fuel ratio.

Step 1: Mix the fuel stabilizer and gasoline before filling the tank. Use a gasoline can or other approved fuel container and shake gently to combine.

NOTE!

To control the amount of fuel stabilizer added to the engine, always mix the fuel stabilizer with gasoline before refuelling, instead of filling the fuel stabilizer directly into the fuel tank of the generator.

Step 2: Replace the fuel cap and secure it.

Step 3: Run the engine for at least 5 minutes to allow the stabilizer to distribute itself throughout the fuel system.

NOTE!

Do not use E 15 or E85 fuel (or fuel containing more than 10% ethanol) in this product. This is a violation of federal law and will damage the unit and void your warranty.

Damage to the fuel system or performance problems caused by the use of an oxygenated fuel containing more than the percentage of oxygenates listed below is not covered under warranty.

Ethanol:

Gasoline containing up to 10% ethanol by volume (commonly referred to as E10) is acceptable. E15 and E85 are not.

8.2 Power generation capacity

If possible, do not operate the power generator without consumers.

However, no consumers should be connected when starting.

The consumers may only be connected one after the other after starting the generator.

Step 1: Start the motor without consumers connected.

Step 2: Connect the first consumer and switch it on. Connect the largest consumer first.

Step 3: Wait until the power generator has stabilized (the motor runs smoothly and the connected device works properly).

Step 4: Connect the next consumer and switch it on.

Step 5: Wait for the generator to stabilize.

Step 6: Repeat steps 4 and 5 for each additional consumer.

NOTE!

Do not overload the power generator. Exceeding the power / current of the generator can damage the generator and / or the electrical devices connected to it.

9 Start-Up

WARNING!

Danger to life!

There is a danger to life if you do not follow these rules.

- Never work with the generator if you are under the influence of alcohol, drugs or medication and/or if you are overtired or suffer from concentration-disturbing illnesses.
- The generator may only be operated by one person. Other persons must stay away from the generator during operation.

CAUTION!

Danger of crushing!

Improper work on the generator may result in injury to fingers and hands.

- Never reach into the generator during operation.

ATTENTION!

Commissioning the motor when the oil level is insufficient can cause serious damage!

Check the fuel level: and use only clean and anhydrous fuel.

The fuel is highly flammable and explosive under certain conditions. Refuel in a well-ventilated environment with the engine switched off. Do not smoke during refuelling and do not use open fire.

Never work with the generator before the air filter has been inserted, otherwise the service life of the motor and generator will be reduced.

ATTENTION!

Before the generator is connected to the building's power grid, the requirements of the responsible grid operator must be met. If necessary, install a mains disconnection device to prevent backfeeding.

NOTE!

- Operate the generator in a clean, dry environment. Do not expose the generator to excessive dust, dirt, moisture and fumes.
- The cooling fins must not be clogged by foreign objects.
- Using a power generator or electrical appliance in wet conditions such as rain or snow, or near a pool or sprinkler system, or when your hands are wet may result in electric shock

Use protective goggles!

Wear safety boots!

Wear protective clothes!

NOTE!

Before putting the generator into operation for the first time, please note the following points.

- Make sure that the generator is on a flat, horizontal and stable surface.
- Ensure that no power consumer is connected to the generator.
- The oil is not supplied.
- The oil has a great influence on the performance and life of the engine.
- For versions with petrol engine, the choke must be switched on for cold start.
- To start the generator with the pull starter, pull the starter slowly out until resistance is felt, then pull jerkily.

9.1 Before starting

CAUTION!

Do not fill the tank in enclosed spaces.

Never fill the tank while the machine is running or still hot.

Do not overfill the tank (do not fill up to the top of the filler), fuel could leak due to engine vibrations. Attention: Fuel expands when heated!

Make sure that no fuel drips to the ground during filling.

Make sure that the fuel filler cap is correctly closed after filling. If fuel has dripped onto the ground, make sure that the area is dry before starting the engine.

Avoid direct physical contact with the fuel and do not inhale vapors; keep out of reach of children.

The petrol vapours are flammable. When refuelling, avoid ignition sources and do not smoke. Avoid naked flames at all costs.

Use normal unleaded, new and clean fuel, with a minimum octane number of 85.

Never mix oil with fuel.

NOTE!

For safety reasons, the device cannot be returned to the dealer after it has been filled with fuel.

Step 1: Check that no power consumer is connected to the power generator.

Step 2: Check grounding. Proper grounding of the generator will prevent electric shock in the generator or connected electrical equipment. Proper grounding also prevents static electricity, which often builds up in ungrounded equipment.

Step 3: Check the air filter: make sure it is in good condition and free of dust or dirt. Refer to the motor manual for access to the filter.

Step 4: Check motor oil level, top up if necessary. Select the appropriate motor oil depending on the temperature.

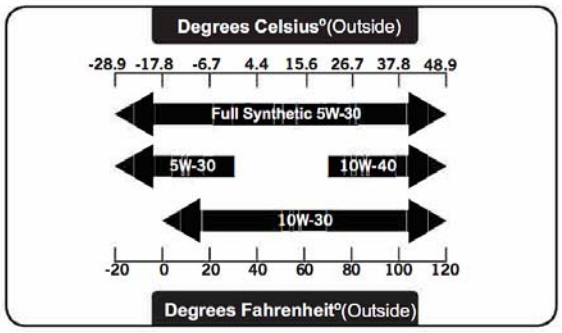


Fig. 14: Motor oil as a dependency of temperature

To do this, place the generator on a flat surface. Clean the area around the filling opening. Remove the cap and slowly fill in the oil until the required level is reached. Never exceed the maximum filling level!
Close the filling opening tightly with the cap. Check the oil level before starting the motor.

Step 5: Clean the area around the tank filler neck and fill the tank with petrol. Use unleaded regular petrol with a minimum octane rating of 85. Never use petrol containing more than 10% ethanol.

ATTENTION!

Never fill the tank while the engine is running! The generator must cool down for at least 2 minutes before the tank cap is opened.

Open the tank cap slowly to equalize the pressure.

Regularly check the lines, the tank and the cap for leaks or damage. Replace if necessary.

If the generator is operated at an altitude of more than 1500 m above sea level, gasoline with at least 85 octane must be used.

The red mark on the fuel filter must not be exceeded.
Close the filler opening tightly with the cap. Wipe up spilled petrol!

10 Starting the PG-I 42 SE generator

ATTENTION!

Never start or stop the engine when electrical appliances are connected.

Disconnect all electrical appliances from the generator before starting.

Check that the generator stands horizontally.

ATTENTION!

Make sure that the starter handle puller does not wind up at high speed. To prevent damage to the starter device, slowly return the starter handle drawbar.

Step 1: Make sure the generator is on a level surface. Disconnect all electrical loads from the generator. Never start or stop the generator when electrical appliances are connected or switched on.

Step 2: Turn the fuel valve to "ON".

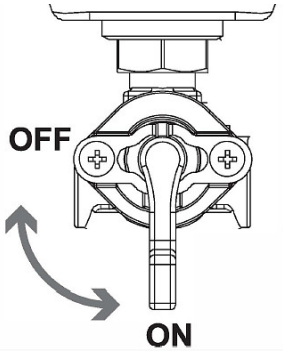


Fig. 15: Open the fuel cock

Step 3: Pull out the choke lever completely.

Fig. 16: Pull out the choke l

NOTE!

The choke does not have to be pulled out to start an already warm engine.

Electric Start:

Turn the motor switch to the "START" position and hold on for 5 seconds.

Manual Start:

Turn the motor switch to the "START" position.
Pull the starter cord slowly until resistance is feit and then pull rapidly.

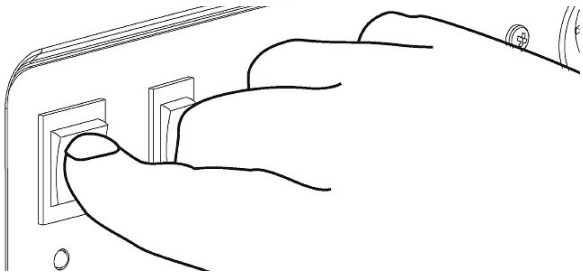


Fig. 17: Start the motor

Step 4: Push the choke lever to the "Run" position to warm up the motor.

Too long operation with the choke can lead to spark plug contamination / flooding of the engine due to lack of supply air. This will not start the engine.

NOTE!

If the generator is used at high altitude or at high temperatures, the air/fuel mixture ratio may be excessively high, resulting in higher consumption and lower performance. Check the actual power of the generator using the following correction factors:
TEMPERATURE: the power decreases on average by 2% per 5 degrees Celsius at temperatures above 20 degrees Celsius.
ALTITUDE: the power decreases on average by 1% per 100 m above sea level. If the altitude for operation exceeds 2000 m above sea level, the engine manufacturer's after-sales service should be consulted for any fuel mixture adjustments..

ATTENTION!

If the motor does not start after 3 starting attempts or stops during operation, check that the generator is horizontal and that sufficient motor oil is filled.

10.1Activation of the ECO switch

The eco switch can be activated in order to minimize fuel consumption and noise while operating the unit during times of reduced electrical output, allowing the engine speed to idle during periods of non-use. The engine speed automatically returns to normal when an electrical load is connected. When the smart switch is off, the engine runs at normal operating speed.

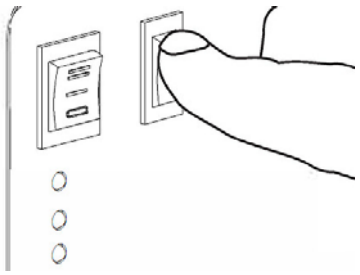


Fig. 18: Eco switch

NOTE!

The ec switch should be set to OFF for heavy electrical loads or momentary fluctuations.

10.2Connecting of consumers

Step 1: Let the engine warm up and stabilize for a few minutes after starting.

Step 2: Connect the desired 230 Volt 50 Hz consumers and switch them on.

Power

Calculation of the power in watts required for starting and operating the loads to be supplied.

Step 1: After starting, allow the engine to stabilize and warm up for a few minutes.

Step 2: Calculate the total power of these consumers in watts. This value corresponds to the power required to keep the loads running.

Watt = Volt x Ampere

Step 3: Consider the starting currents of the consumers.

Step 4: Plug in the desired single-phase 230 Volt 50 Hz AC consumers and switch them on.

NOTE!

- DO NOT connect 3-phase consumers to the power generator.
- DO NOT overload the generator.

ATTENTION!

Ensure that the rated voltage and frequency of the generator are compatible with all electrical loads that the equipment must supply. If the current consumption exceeds the generator power, one or more loads must be disconnected and connected to a separate generator.

The connection of a power generator to the power lines of your power supply company or to another power source must be clarified in advance with the network operator.

10.3 12 V DC Outlet

The 12 V DC socket can be used with the supplied charging cable, USB charger and other standard 12 V DC plugs. The DC output is unregulated and may damage some products. Make sure that the input voltage range of your accessories is at least 12-24 V DC. When using the DC outlet, set the economy mode switch to "OFF"..

NOTE!

- Do not operate a device while it is connected to the 12 V DC outlet.
- Prolonged contact with engine exhaust fumes may result in serious or fatal injury.
- Do not place an appliance on the generator exhaust side when charging. Extreme heat from exhaust gases can damage the unit and cause a fire.

10.4Switch of the generators

Step 1: Switch off and disconnect all electrical loads. Never start or stop the generator when electrical appliances are connected or switched on.

Step 2: Allow the generator to idle for a few minutes to stabilize the internal engine and generator temperatures.

Step 3: Set the fuel tap to "OFF".

Step 4: Run the engine until the fuel shortage has stopped the engine. This usually takes a few minutes.

Step 5: Set the motor switch to "OFF".

ATTENTION!

Always make sure that the fuel valve and motor switch are in the "OFF" position when the device is not in use.

NOTE!

The motor is used for a period of two (2) weeks or longer. For information on proper storage of the engine and fuel, see the Storage section.

10.5Overload mode

The overload indicator switches on when the load is exceeded. When the maximum load is reached, the LED flashes and cuts off power to the sockets. Turn off the generator, wait for the light to go out, and restart the generator to restore power.

11 Start generator PG-I 80 SE

NOTE!

Check the lubricant level on a flat surface with the engine off before each use of the generator.

If the position of the generator is not level, the unit may not start or may turn off during operation.

NOTE!

Do not place the power generator directly on the ground when using the unit on grassy areas or in areas with dense vegetation. Doing so may cause grass discoloration and/or localized soil damage.

Step 1: Disconnect all consumers from the power generator.

Step 2: Set the voltage selector switch (optional) to adjust the voltage requirements for the application.

Step 3: Set the Eco switch to OFF. (If you want to use the Eco system, set the Eco switch to ON after the engine warms up after 2 or 3 minutes.

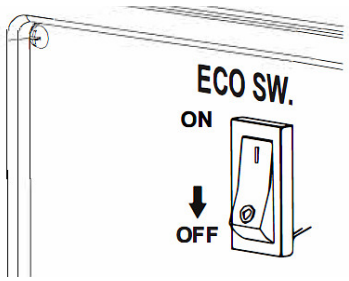


Fig. 19: ECO-Button

Step 4: Turn the multiswitch to the position START.

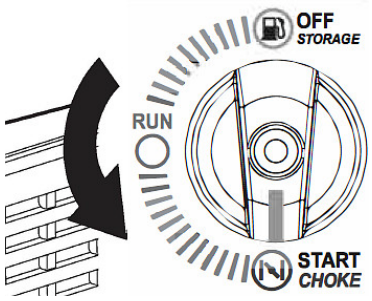


Fig. 20: Multiswitch

Electrical start

Set the motor switch to START and hold for 5 seconds. When the engine starts, the starter motor stops automatically. If the engine does not start, wait at least 10 seconds before operating the starter again.

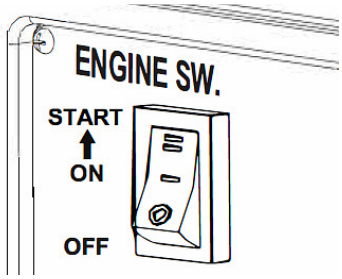


Fig. 21: Electrical start

Manual start

Use the pull starter if the battery voltage is too low to drive the starter.

- Set the engine switch to ON.

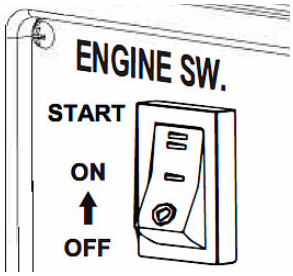


Abb. 22: Manual Start

-Pull lightly on the starter handle until you feel resistance. Then pull quickly in the direction of the arrow as shown in Fig. 23.

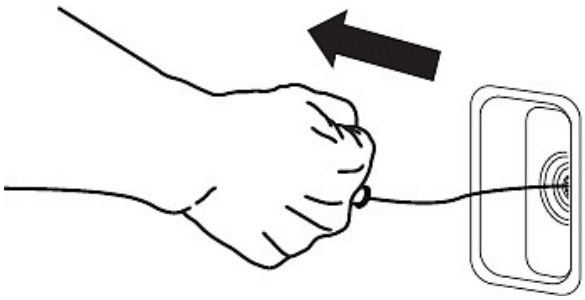


Fig. 23: Manual start using the pull starter

NOTE!

Do not let the handle snap back after starting. Let the handle slide back to its original position carefully.

- Let the motor run for 15 to 30 seconds and then turn the multiswitch to the RUN position.

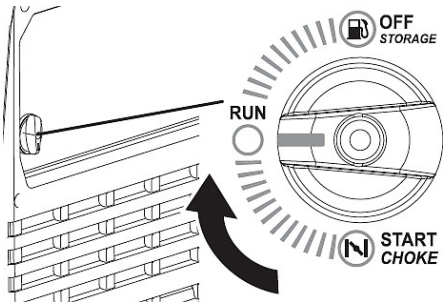


Fig. 24: RUN Position

- Connect the consumer.

11.1Switching off the generator

Step 1: Switch off and disconnect all electrical consumers. Never start or stop the generator when electrical appliances are connected or switched on.

Step 2: Let the generator idle for a few minutes to stabilize the internal temperatures of the engine and generator.

Step 3: Set the motor switch to "OFF.

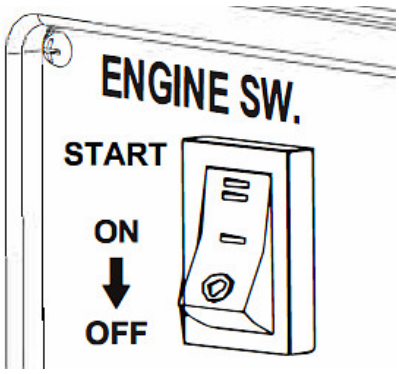


Fig. 25: Motor switch OFF position

Step 4: Turn the multiswitch to "OFF.

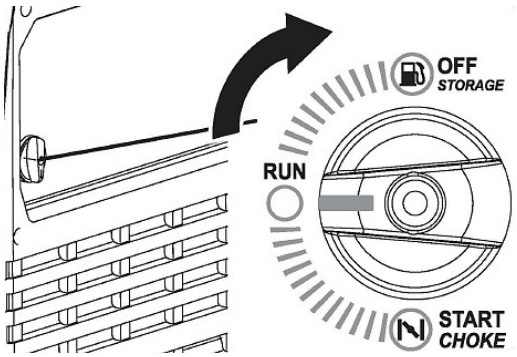


Fig. 26: Multiswitch OFF position

How to stop the engine in an emergency situation:

Set the motor switch to OFF.

DANGER!

Maintain a free space of at least 1 meter on all sides of the product during operation and storage, even overhead. Allow to cool for at least 30 minutes before storage. Heat generated by exhaust and fumes may be sufficient to cause severe burns and/or ignite combustible objects.

11.2Connection of consumers

Before connecting a device or power cord to the power generator:

- Make sure that it is in good condition. Faulty equipment or power cords can cause electric shock.

- If an appliance stops working normally, becomes sluggish or stops suddenly, turn it off immediately. Disconnect the appliance from the power supply and determine if the problem is with the appliance or if the rated load of the power generator has been exceeded.

Most appliance motors require more than their rated power to start. Make sure that the electrical power of the tool or device does not exceed the maximum power of the generator. In any case, the total power consumption of all connected devices must be considered.

11.3Parallel connection between 2 power generators (optional)

CAUTION!

The ground cable must be installed and functional (where necessary).

Before connecting a consumer to one of the power generators, make sure that the consumer is in good condition and that its electrical rating does not exceed that of the socket.

Most motorized devices require more than their electrical power to start. When an electric motor is started, the overload indicator (red) may light up. This is normal if the OVERLOAD indicator (red) goes out within 5 seconds. If the OVERLOAD indicator (red) remains lit, contact your generator dealer.

During parallel operation, the Eco switch on both generators should be in the same position. Connect the parallel power cable between two generators.

CAUTION!

Make sure that the parallel connection cables have been inserted correctly into the parallel connection socket. If the cables have not been connected correctly, starting them may damage the generator.

DANGER!

Only two identical power generators can be connected in parallel. The parallel connection of more than two generators is not allowed.

The parallel connection may only be made with the special cables supplied with the power generator. When using the parallel connection between the power generators, make sure that the plugs are always fully inserted into the sockets. Insert the plugs into the sockets of the parallel connection in the correct way.

Do not pull out the connecting cables during parallel operation.

The parallel connection cables must be connected before commissioning and may only be pulled out after the power generators have been switched off. If one of the two power generators is switched off during parallel operation, no power is supplied at the output.

If only one power generator is used, make sure that the cables of the parallel connection have been pulled out.

If the two power generators operate independently, do not use a parallel connection.

11.4Feeding into the power grid

Connections to the electrical system of a building.

The connections for the emergency power supply of the electrical system of a building must be made by a qualified electrician. It must be possible to disconnect the power generator from the power supply system. It must comply with all applicable laws and electrical regulations. In some areas, the registration of power generators with local utility companies is required by law. Check the local regulations for proper registration and use.

DANGER!

Improper connections to the electrical system of a building can lead electricity from the power generator back into the supply lines. Such recycling can kill utility workers or others who come into contact with the lines during a power outage, and the generator can explode, burn or cause a fire when power is restored. Consult the utility company or a qualified electrician before making power connections.

12 Care, maintenance and repair

ATTENTION!

- All cleaning, care, maintenance and repair work may only be carried out with the generator switched off.
- Always remove the spark plug connector from the spark plug.
- No power consumer may be connected to the generator.
- Wait until the hot parts have cooled down.
- Never clean the machine with a water jet or flammable products!
- Before putting the generator back into operation, make sure that it is completely dry.

NOTE!

The warranty does not cover parts of the generator that have been misused or negligently handled by the operator. For full warranty coverage, the operator must operate the generator as described in the manual.

Regular adjustments must be made to ensure proper operation of the generator. Follow the instructions in the "Maintenance schedule".

12.1 Care by cleaning

The generator must always be kept in a clean condition.

ATTENTION!

- Never use solvents to clean plastic parts or painted surfaces. The surface may become detached and consequential damage may occur.

Use protective gloves!

NOTE!

Never use strong cleaning agents for any cleaning-work. This can damage or destroy the device

All plastic parts and painted surfaces should be cleaned with a soft, damp cloth and some neutral cleaner. Remove excess grease or leaked oil with a dry, lint-free cloth.

Always keep the cooling fins clean and free.

12.2 Maintenance and repair

Maintenance and repair work may only be carried out by qualified personnel.

If the generator does not function properly, contact a specialist dealer or our customer service. The contact details can be found in chapter 1.2 Customer service.

All protective and safety devices must be reinstalled immediately after completion of repair and maintenance work.

12.3 Maintenance schedule PG-I 42 SE

Maintenance interval / Operating hours	Maintenance tasks
Before each use	- Check fuel level, check lines for leaks, replace lines if necessary. - Check engine oil level.
after the first 5 hours	Changing the motor oil
after 50 hours	Clean the air filter, replace if necessary.
after 50 hours	Changing the motor oil
after 100 hours	Check the air filter, clean if necessary.
after 100 hours	Check the muffler filter, clean and replace if necessary.
after 100 hours	Check spark arrester, clean, replace if necessary
after 100 hours	Change the oil, clean the oil tank
after 250 hours	Clean combustion chamber
every 3 years	Replace fuel line

12.4 Maintenance schedule PG-I 80 SE

	Before each use	After 1st month or 20 hours	Every 3 months or 50 hours	Every 6 months or 100 hours	Every year or after 300 hours
Check Engine oil	●				
Change Engine oil		●		●	
Check Air Filter	●				
Clean Air Filter			●		
Change Air Filter					●
Check/Adjust Spark Plug				●	
Replace Spark Plug					●
Check/Adjust Idle Speed					●
Clean Fuel Tank & Filter				●	
Check Fuel Hose	●				
Fuel Filter	Inspect				Replace
Check/Adjust Valve Clearance					●
Clean Spark Arrester				●	

Fig. 27: Maintenance schedule

Maintenance work should only be carried out by qualified personnel after the generator has been shut down and cooled down. Operation under dusty conditions may shorten the maintenance intervals.

12.5Maintenance work PG-I 42 SE

12.5.1 Oil change

Change oil when the engine is warm. Refer to the oil specification to select the correct oil grade for your operating environment. When operating in dusty environments or at high outside temperatures, change the oil at shorter intervals.

DANGER!

- Hot oil can cause burns. Let the engine cool down a little before changing the oil.
- Avoid skin contact with the used oil.

Step 1: Switch off the power generator and let it cool down.

Step 2: Place a tub to collect the oil under the engine.

Step 3: Remove the oil drain plug and drain the oil completely.

Step 4: Clean the area around the oil filler opening.

Step 5: Replace the drain plug.

Step 6: Remove the oil filler cap / dipstick to top up oil.

Step 7: Slowly pour the new oil into the engine until the required level is reached at the bottom edge of the filler neck. Never exceed the maximum fill level!

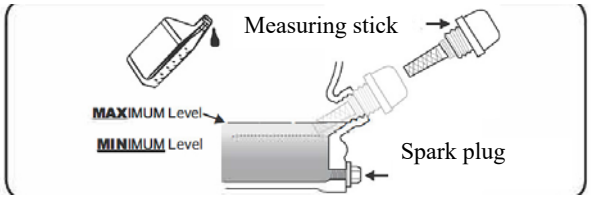


Fig. 28: Fill in oil PG-I 42 SE

Step 8: Close the filling opening well with the cap and reinstall the cover.

Step 9: Wipe up spilled oil. Always check the oil level before starting the engine!

Step 10: Dispose of the used oil properly.

NOTE!

After filling in oil, a visual check should show that the level is at the bottom edge of the filling opening.

12.5.2 Spark plug maintenance

Used Spark plug

OEM Spark Plug: TORCH F6RTC

Check the spark plug regularly, replace if necessary. The generator then starts more easily and runs better.

Step 1: Switch off the power generator and let it cool down.

Step 2: Remove the spark plug connector and unscrew the spark plug with a spark plug wrench (not included).

Step 3: Check the electrode on the spark plug. The electrode must be clean and not worn to produce the spark required for ignition.

Step 4: Check the coloration. The carbon film on the porcelain insulator around the electrode on the spark plug must be light brown. Make sure that the spark plug gap is 0.7 - 0.8 mm.

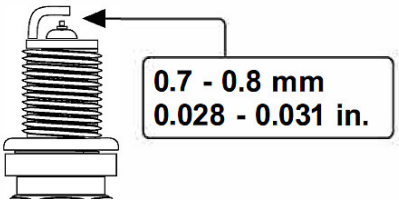


Fig. 29: Check electrode distance

Step 5: Screw the cleaned or new spark plug into the cylinder head. Use a spark plug wrench to tighten the spark plug.

Step 6: Attach the plug connector, mount the protective cap and cover.

12.5.3 Clean the air filter

If the air filter is dirty, the motor will not run smoothly and can be damaged. Clean the air filter after 50 operating hours and replace it annually. When operating in dusty conditions, clean the air filter more frequently and replace it at shorter intervals.

Step 1: Switch off the power generator and let it cool down.

Step 2: Remove the maintenance cover and the foam element securing the air filter to the assembly.

Step 3: Wash the filter element in soapy water, rinse with clean water and dry with a clean cloth or allow to dry completely.

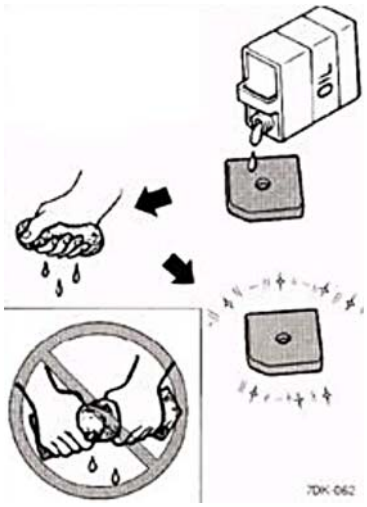


Fig. 30: Washing and oiling air filters

Step 4: Saturate the filter in clean engine oil, then press a clean, absorbent cloth into the filter to remove excess oil.

Step 5: Insert the filter into the assembly. Replace the air filter cover and snap it into place.

DANGER!

Do not twist the filter element when squeezing to avoid damage.

DANGER!

Never start the engine without a filter element.

12.5.4 Clean spark protection

Maintenance must be carried out every 6 months or every 100 operating hours.

Step 1: Switch off the power generator. Allow the engine to cool completely before servicing the spark arrester.

Step 2: Unscrew the screws and remove the cover on the back of the power generator.

Step 3: Remove the spark arrester.

Step 4: Carefully remove the carbon deposits from the spark arrester screen with a wire brush.

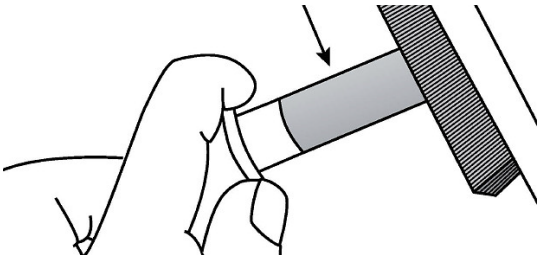


Fig. 31: Clean spark protection

Step 5: Remove the carbon deposits on the silencer and on the spark guard with a small wire brush. Caution! Do not damage the silencer and spark arrester.

Step 6: Check the silencer and spark arrester. Replace if damaged.

Step 7: Refit the spark guard and tighten the clamp. Then screw the cover to the rear of the power generator.

DANGER!

State and local laws and regulations specify when and where spark arrestors are required. In California, this generator may not be used on wooded, brush-covered or grassy areas unless the engine is equipped with a spark arrestor.

DANGER!

If the spark arrester is not cleaned, the motor performance is impaired.

12.5.5 Cleaning the power generator

Make sure that the generator is kept clean and properly stored. Operate the unit only on a flat surface in a clean, dry operating environment. DO NOT expose the device to extreme conditions, excessive dust, dirt, moisture or corrosive vapors.

DANGER!

Never clean the generator with water. Water can enter the generator through the cooling slots and damage the generator windings. It can also contaminate the fuel system.

Use a damp cloth to clean the outer surfaces of the power generator. Use a soft brush to remove dirt and oil.

Use an air compressor to remove dirt and debris from the generator. Eye protection must be worn for this.

Check all ventilation slots and cooling slots for cleanliness and integrity.

12.6 Maintenance work PG-I 80 SE

Store the power generator in a clean and dry environment where it is not exposed to dust, dirt, moisture or corrosive vapors. Do not allow the cooling air slots in the generator to become clogged by foreign objects such as leaves, etc.

Do not use water to clean the generator. Water entering the fuel system or other internal parts of the unit may cause problems that shorten the life of the generator.

12.6.1 Clean / replace air filter

Keep the air filter clean to ensure proper performance and long life.

Step 1: Loosen the screws on the side of the right maintenance cover and remove the cover.

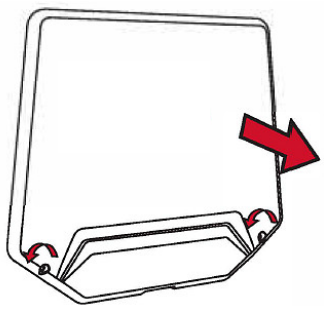


Fig. 32: Remove maintenance flap

Step 2: Loosen the air filter cover clip, pull the cover down from the unit, remove the air filter cover and set it aside.

Step 3: Remove the air filter.

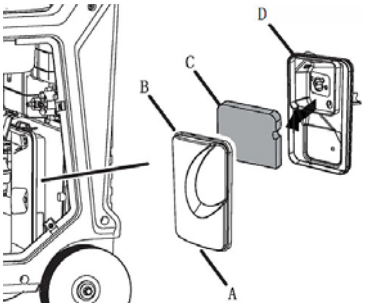


Fig. 33: Remove filter

Step 4: Wash the air filters with warm soapy water. Rinse and squeeze to dry.

Step 5: Reinsert the air filters. remove the maintenance flap.

DANGER!

Make sure that the filters are correctly positioned in the generator. If the filters are not installed correctly, dirt can get into the engine and cause rapid engine wear.

12.6.2 Replace engine oil

For optimum performance, the engine oil should be changed every 100 operating hours or every 6 months.

NOTE!

Drain the engine oil while the engine is still warm but not hot. Warm engine oil drains faster and more completely.

Step 1: Loosen the screws on the side of the left maintenance flap. Remove the cover and put it aside.

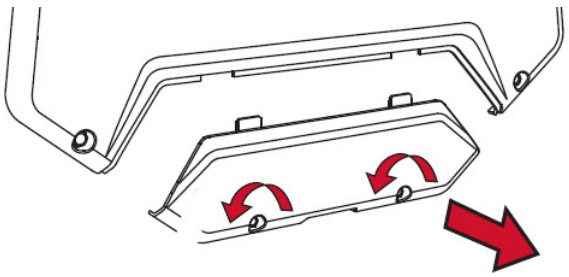


Fig. 34: Remove maintenance flap

Step 2: Reach under the power generator and remove the black rubber seal under the oil drain plug.

Step 3: Place a suitable container under the generator to collect the used oil.

Step 4: Remove the oil filler cap / dipstick.

Step 5: Remove the other black rubber seal on the front of the oil drain plug.

Step 6: Use a wrench through the hole to remove the oil drain plug and allow the oil to drain completely.

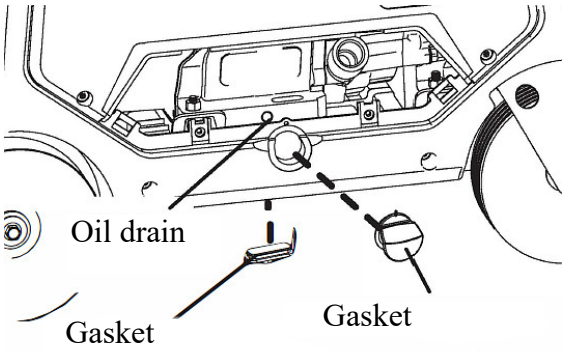


Fig. 35: Remove oil drain plug

Step 7: Replace the oil drain plug and tighten it firmly.

Step 8: Replace the two black rubber seals.

Step 9: Hold the generator level and top up the engine oil as described in the section "Filling the engine oil" in this manual. See the "Filling Engine Oil" section earlier in this manual for the amount of engine oil required to top up the generator.

Step 10: Replace the oil filler cap / dipstick securely.

Step 11: Replace the left maintenance cover (Fig.37). Tighten the screws.

NOTE!

Do not change engine oil when hot. Accidental contact with hot engine oil can cause severe burns.

NOTE!

Used engine oil must be disposed of at an approved disposal point. For further information, please contact your local dealer.

12.6.3 Replace / clean spark plug

The spark plug must be clean and free of deposits to ensure proper engine operation. If the engine is hot, allow it to cool down before replacing the spark plug.

Step 1: Loosen the screws on the side of the right maintenance cover. Remove the cover and put it aside.

Step 2: Remove the spark plug connector.

Step 3: Clean dirt from the spark plug base.

Step 4: Remove the spark plug with a spark plug wrench.

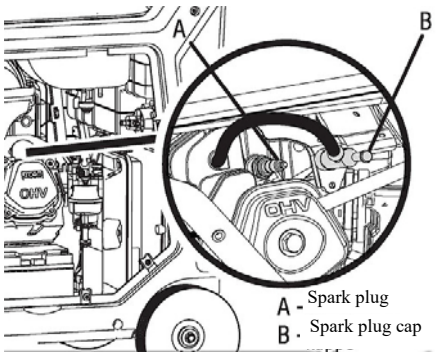


Fig. 36: Spark plug

Step 5: Check the spark plug. Replace it if the electrode is worn or dirty or the insulator has cracks or chipping.

Step 6: Measure the spark plug electrode gap with a feeler gauge. Correct the gap if necessary by carefully bending the side electrode. The gap should be:0.7 to 0.8 mm (0.028 to 0.031 inch).

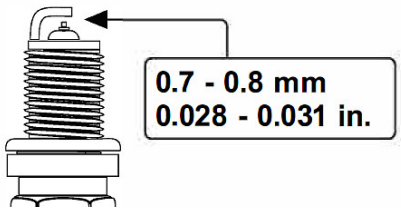


Fig. 37: Check electrode distance

Step 7: Insert the spark plug by hand to prevent overtightening. Then tighten the spark plug.

NOTE!

An incorrectly tightened spark plug becomes very hot and can damage the engine.

Step 8: Attach the spark plug cap and close the maintenance cover.

12.6.4 Clean / replace spark arrester

The spark arrester must be serviced every 100 hours to ensure that it works as intended.

When the engine is running, the exhaust is very hot. Let the exhaust cool down before servicing the spark arrester.

Step 1: Remove the two screws and take off the tail pipe and the spark arrester.

Step 2: Use a brush to remove carbon deposits from the spark arrester screen. Be careful not to damage the spark arrester. The spark arrester must be free of breaks and cracks. Replace the spark arrester if it is damaged.

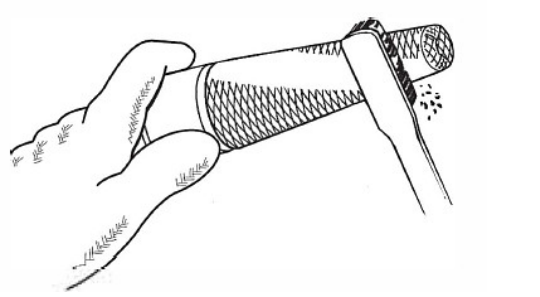


Fig. 38: Clean spark catcher

Step 3: Install the spark arrester in reverse order.

12.6.5 Empty fuel tank

Remove the fuel tank cap, remove the fuel strainer and empty the fuel tank into an approved fuel tank. We recommend the use of a commercially available gasoline hand pump to empty the tank. Do not use an electric pump. Reinstall the fuel strainer and fuel tank cap.

12.6.6 Clean the carburetor

Step 1: Loosen the screws on the side of the right maintenance cover. Remove the cover and put it aside.

Step 2: Turn the multiswitch to the RUN position (only for model PG-I 80 SE).

Step 3: Place a suitable container under the carburetor drain plug to collect fuel. Loosen the screw.

Step 4: Drain the fuel completely into the tank.

Step 5: Tighten the drain plug.

Step 6: Set the multiswitch to OFF (PG-I 80 SE model only).

13 Troubleshooting

Faults	Possible cause	Solution
The generator won‘t start.	No fuel Defective spark plug Load connected at start Water in fuel	Refuel Replace the spark plug Remove load from device Drain and refill fuel
Generator does not start; generator starts, but runs unstable	Low oil level Choke in the wrong position loose ignition cable Dirty air filter	Refill with oil Place choke in correct position Attach the cable to the spark plug. Clean air filter. Replace if necessary
Generator switches off during operation	No petrol Low oil level	Refill the petrol Refill with oil
Generator cannot provide enough power or overheats	Generator is overloaded Insufficient ventilation	Check the load Check ventilation / clean if necessary
Repeated tripping of the circuit-breaker	Overload Cable or device are defective	Check the load Check for damage or defect
No alternating current output	Cable not properly connected Connected device is defective Circuit breaker tripped Loose wiring	Check all connections Replace the defective device. Reset circuit breaker Check the cable connections and tighten them.
Output indicator is switched off and the overload indicator is switched on.		Check the AC load. Switch off the motor and restart. Check the cooling air intake. Switch off motor and restart

14 Disposal, recycling of used devices

Please take care in your own interest and in the interest of the environment that all component parts of the machine are only disposed of in the intended and permitted way.

14.1 Decommissioning

Immediately decommission used machines in order to avoid later misuse and endangering of the environment or of persons.

Step 1: Eliminate all environmentally hazardous operating materials from the used device.

Step 2: If required, disassemble the machine into easy-to-handle and usable components and parts.

Step 3: Dispose of machine components and operating materials by the disposal channels provided.

14.2 Disposal of new equipment packaging

All packaging materials and packaging aids used are recyclable and must always be recycled.

These components must be disposed of separately and properly. If in doubt, contact municipal waste disposal.

If necessary, a specialist waste disposal company should be called upon to help with the processing of the waste.

14.3 Disposal of electrical equipment

Electrical equipment contains a variety of recyclable materials and environmentally harmful components.

These components must be disposed of separately and properly. In case of doubt, contact the municipal waste disposal department.

If necessary, a specialist waste disposal company should be called upon to help with processing.

14.4 Disposal of lubricants

Remove any leaking, used or excessive grease at the lubricating points.

Disposal notes for used lubricants are available from the manufacturer of the lubricants. If necessary, request the product-specific data sheets.

15 Spare parts

DANGER!

Risk of injury due to the use of wrong spare parts!

Dangers may result for the user and damages as well as malfunctions may be caused by using wrong or damaged spare parts.

- Only use original spare parts of the manufacturer or spare parts admitted by the manufacturer.
- Always contact the manufacturer in case of uncertainties.

Tips and recommendations

The manufacturer's warranty will become null and void if non-permissible spare parts are being used.

15.1 Ordering spare parts

The spare parts may be purchased with the authorised dealer or directly with the manufacturer. Please find the corresponding contact data in Chapter 1.2 Customer service.

Indicate the following basic information for requests or orders of spare parts:

- Type of device
- Item No.
- Position No.
- Year of construction:
- Quantity
- Required mode of dispatch (mail, freight, sea, air, express)
- Address of dispatch

Spare part orders which do not include the above indications may not be taken into consideration. If the indications regarding the mode of dispatch are missing, the product is dispatched at the discretion of the supplier.

You will find information regarding the device type, item No. and year of construction on the type plate which is fixed on the device.

Example

The tank cap for the PG-I 42 SE generator must be ordered. The tank cap has the number 5 in the spare part drawing 2.

When ordering spare parts, send a copy of the spare parts drawing (2) with the marked component (tank cap) and marked position number (5) to the authorised dealer or to the spare parts department and provide the following information:

- Type of device: **Generator PG-I 42 SE**
- Item number: **6706420**
- Drawing number: **2**
- Position number: **5**

The item numbers of your device:

Generator PG-I 42 SE: **6706420**
Generator PG-I 80 SE: **6706800**

15.2 Spare parts drawings

In case of service, the following drawing shall help to identify the necessary spare parts. If necessary, send a copy of the parts drawing with the marked components to your authorised dealer.

15.2.1 Spare parts drawings PG-I 42 SE

Spare parts drawing 1

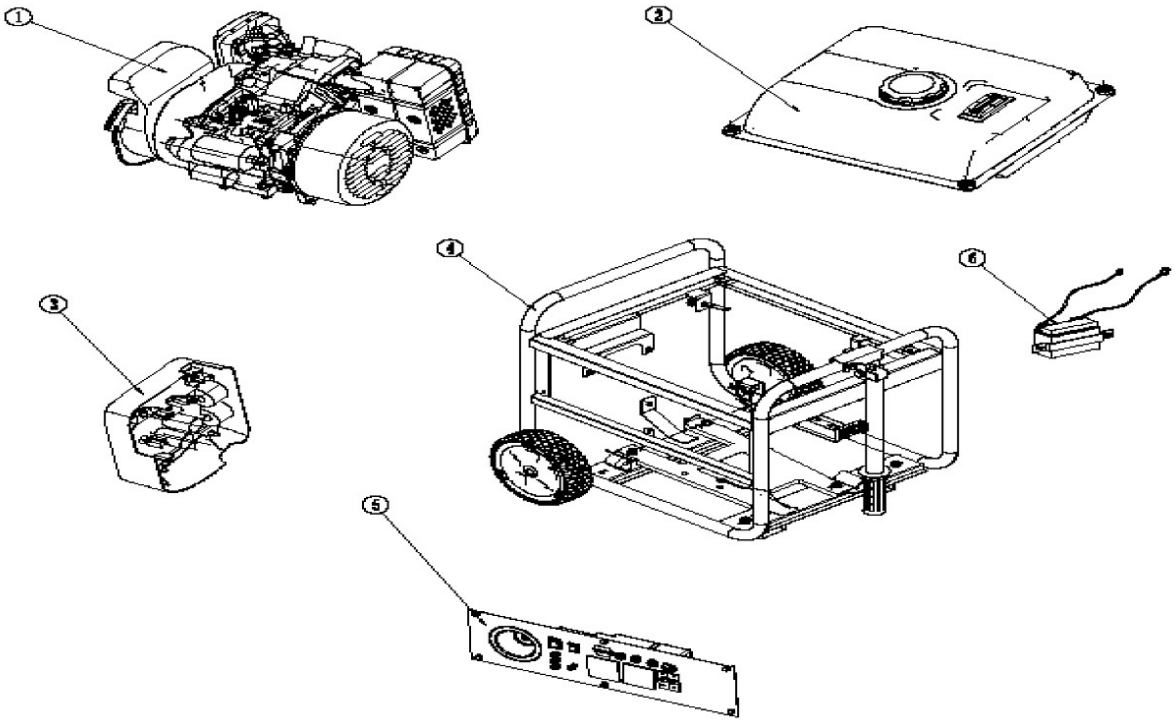


Fig. 39: Spare parts drawing 1 PG-I 42 SE

Spare parts drawing 2

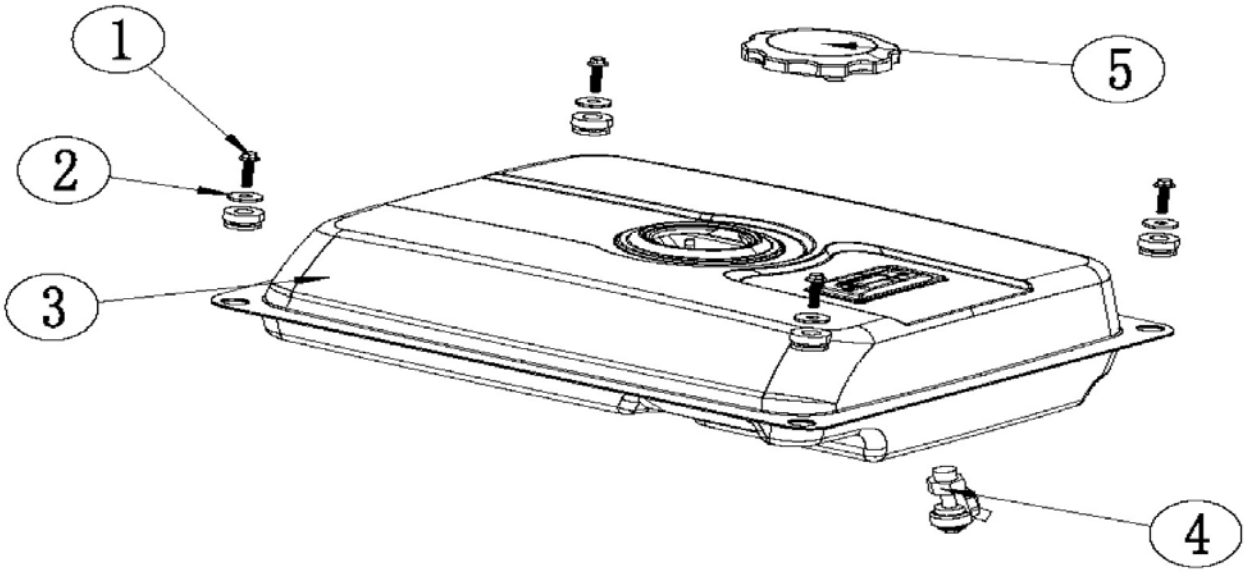


Fig. 40: Spare parts drawing 2 PG-I 42 SE

Spare parts drawing 3

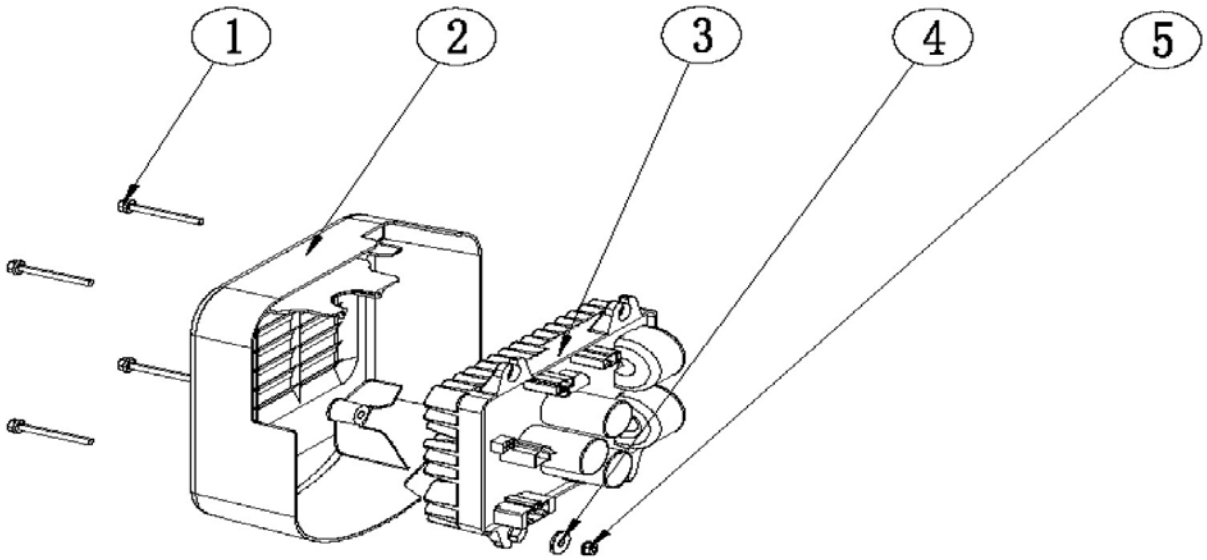


Fig. 41: Spare parts drawing 3 PG-I 42 SE

Spare parts drawing 4

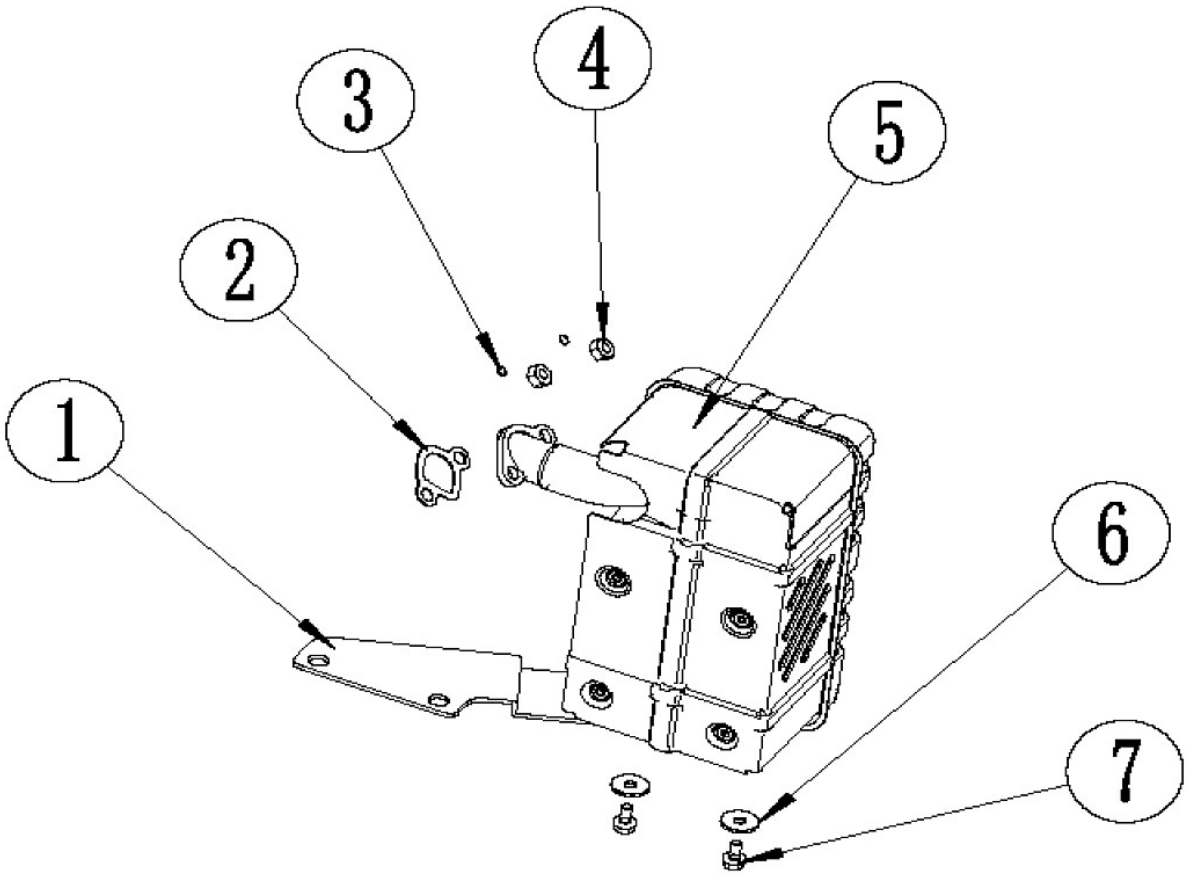


Fig. 42: Spare parts drawing 4 PG-I 42 SE

Spare parts drawing 5

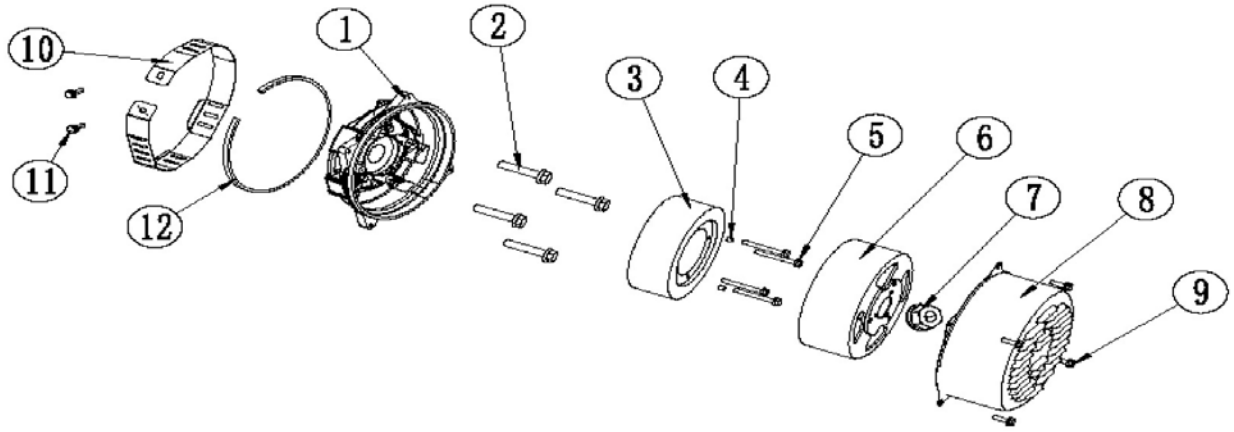


Fig. 43: Spare parts drawing 5 PG-I 42 SE

Spare parts drawing 6

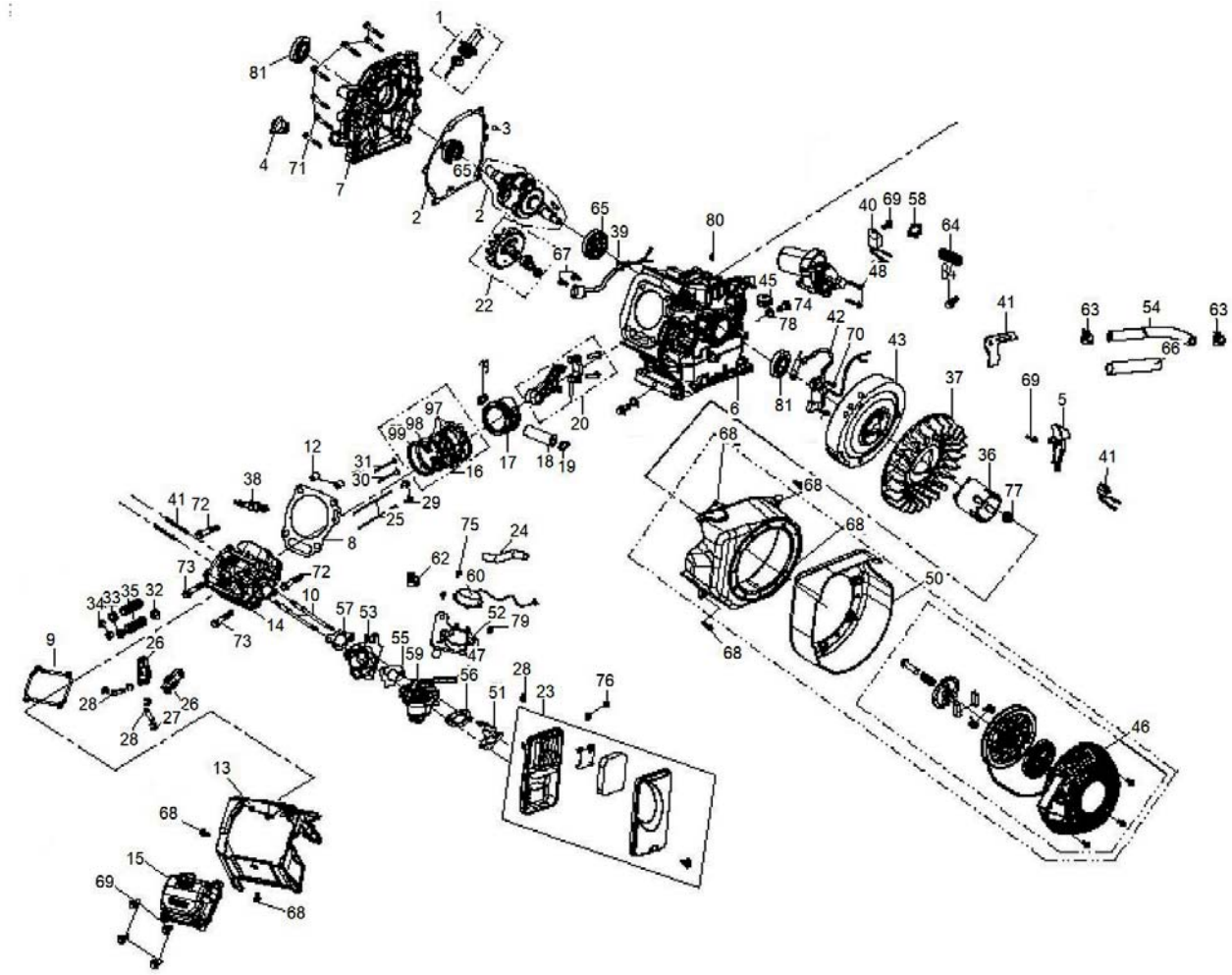


Fig. 44: Spare parts drawing 6 PG-I 42 SE

Spare parts drawing 7

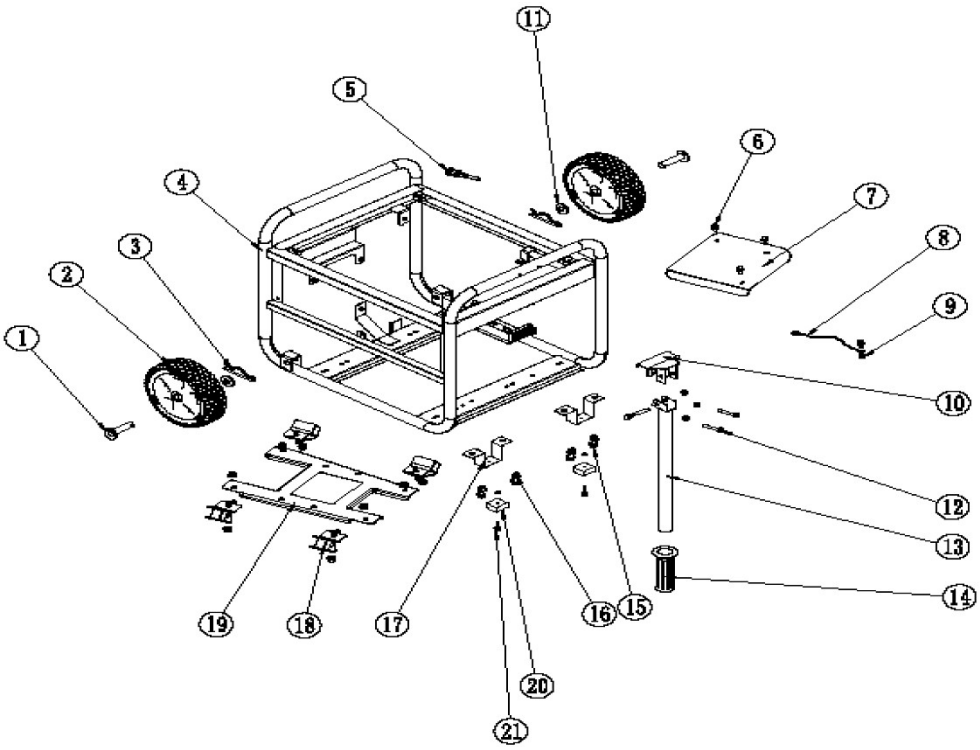


Fig. 45: Spare parts drawing 7 PG-I 42 SE

Spare parts drawing 8

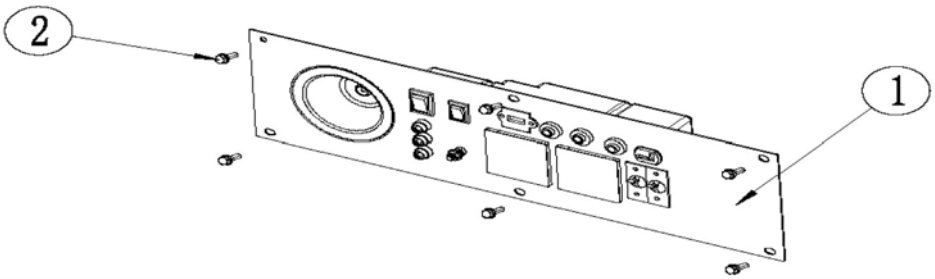


Fig. 46: Spare parts drawing 8 PG-I 42 SE

Spare parts drawing 9

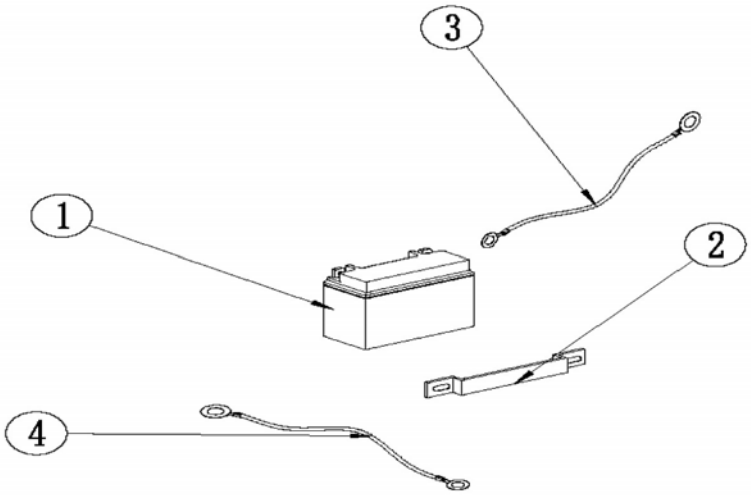


Fig. 47: Spare parts drawing 9 PG-I 42 SE

15.3Spare parts drawings PG-I 80 SE

Spare parts drawing 1

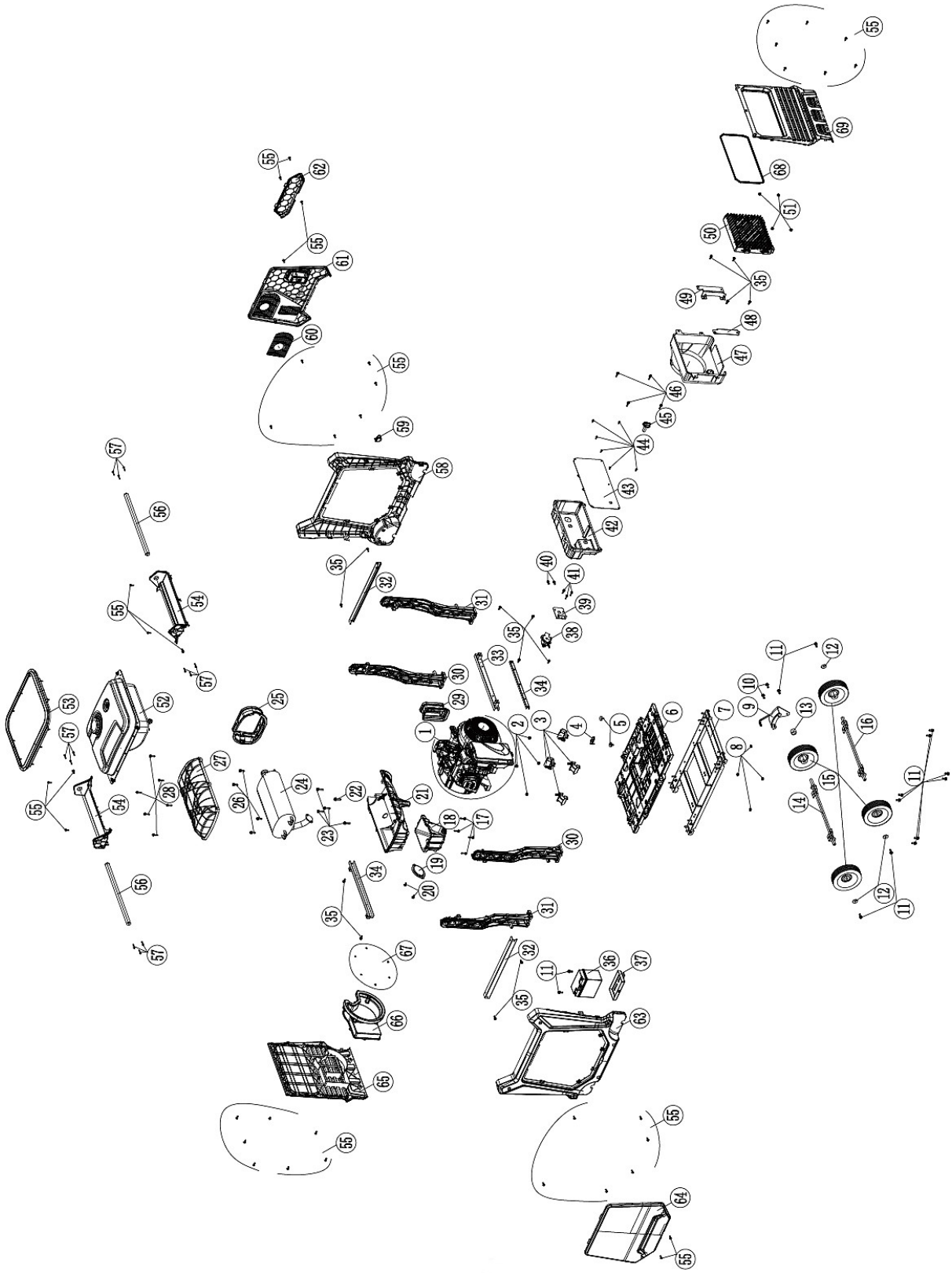


Fig. 48: Spare parts drawing 1 PG-I 80 SE

Spare parts drawing 2

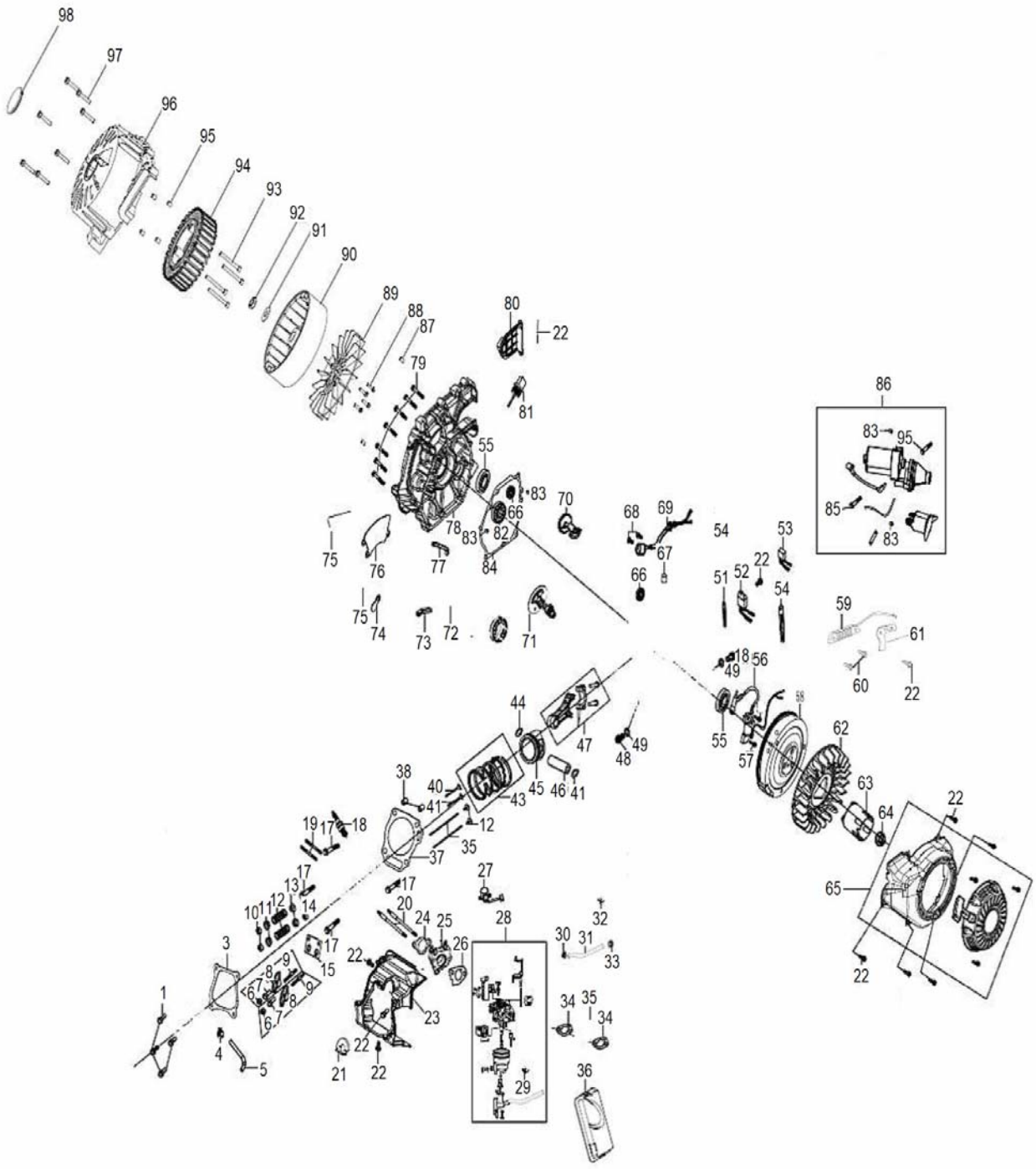


Fig. 49: Spare parts drawing 2 PG-I 80 SE

16 Electrical circuit diagram PG-I 42 SE and 80 SE

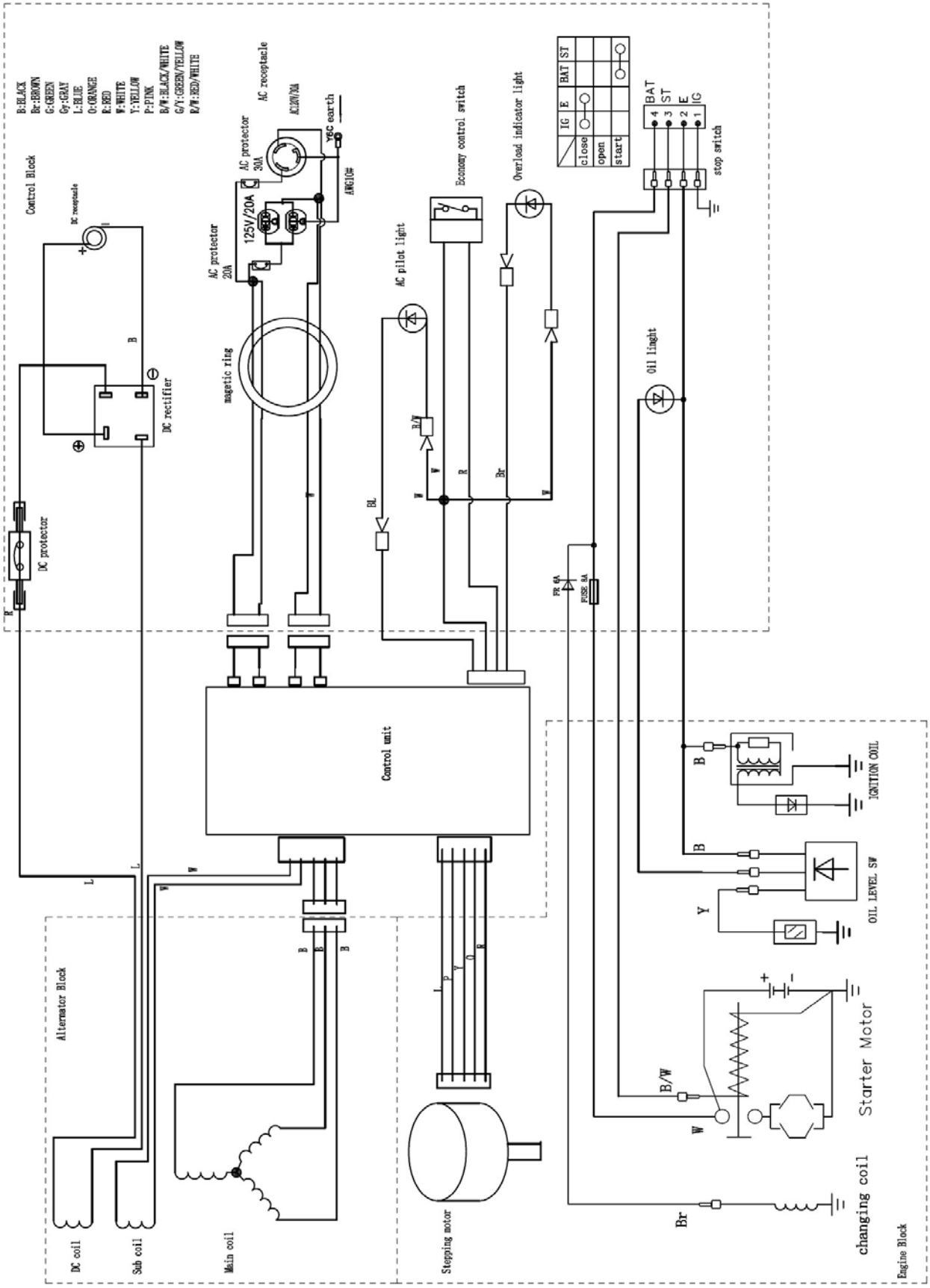


Fig. 50: Electrical circuit diagramPG-I 42 SE and 80 SE

17 EC Declaration of Conformity

According to machine directive 2006/42/EC Annex II 1.A

Manufacturer/distributing company: Stürmer Maschinen GmbH
Dr.-Robert-Pfleger-Str. 26
D-96103 Hallstadt

herewith declares that the following product

Product group: Unicraft® Werkstatttechnik

Machine type: Generator

Designation of the device *: ☐ PG-I 42 SE ☐ PG-I 80 SE

Item number *: ☐ 6706420 ☐ 6706800

Serial number*: _____

Year of manufacture*: 20___

* fill in these fields using the information on the nameplate

complies with all relevant provisions of the above mentioned directive as well as the other applied directives (below) - including their applicable modifications at the time of the declaration.

EU directives: 2014/30/EU EMC Directive
2011/65/EU RoHS Directive

The following harmonised standards have been applied:

DIN EN ISO 60204-1:2006/AC:2010 — Safety of machinery - Electrical equipment of machines - Part 1: General requirements

DIN EN 8528-13:2016 — Reciprocating internal combustion engine driven alternating current generating sets - Part 13: Safety

DIN EN 55012:2007+A1:2009 — Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of off-board receivers

Responsible for the documentation: Kilian Stürmer, Stürmer Maschinen GmbH, Dr.-Robert-Pfleger-Str. 26, D-96103 Hallstadt

Hallstadt, 02.07.2019

Kilian Stürmer
Manager

CE

18 Notes


stürmer
OPTIMUM
stürmer